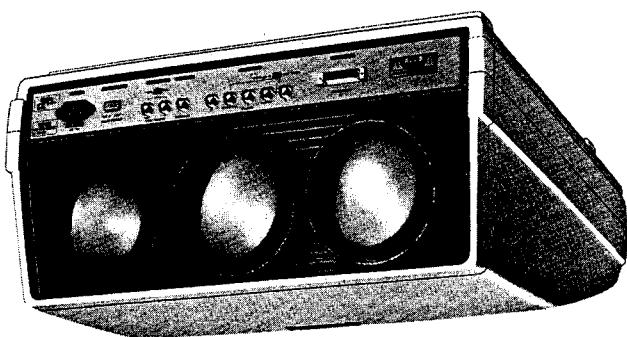


Service Manual

Colour Video Projector

PT-102N/GN/AN/SN

chassis No. Q5



GN U. K. Only
 AN Australia Only
 SN Saudi Arabia Only

The service technician is required to read and follow the "Safety Precautions" and "Important Safety Notice" in this service manual.

Specifications

| | | |
|--------------------|---|---|
| Power Source: | AC 220V ~ 240V, 50/60 Hz (PT-102N/102SN) | 72" (1829 mm) Picture size: 87.0 inches (2210 mm) |
| | AC 240V, 50 Hz (PT-102GN/102AN) | 100" (2540 mm) Picture size: 119 19/32 inches (3037 mm) |
| Power Consumption: | 179W (average) | 120" (3048 mm) Picture size: 143 3/32 inches (3635 mm) |
| Projection Tube: | 7 inches (179 mm) specially developed High-Brightness liquid cooled CRTs (R, G, B). | Light Flux: 500 lumens typical (at white peak) |
| Lenses: | F 1.0 f145 Three Lenses (HYBRID) | Operating Ambient Temperature: |
| Resolution: | Video..... 650 TV Lines (typical) RGB..... 1000 TV Lines (typical) | Operating Ambient Humidity: |
| Video Input Level: | 1 ± 0.3Vp-p 75Ω | 20% ~ 80% |
| Line in/out Level: | 1 ± 0.3Vp-p 75Ω or high impedance | Supplied Accessories: |
| RGB Input Level | R: 0.7 ± 0.3Vp-p 75Ω G: 0.7 ± 0.3Vp-p 75Ω (G SYNC: 1 ± 0.3Vp-p 75Ω) B: 0.7 ± 0.3Vp-p 75Ω H · H/V: 0.3 ~ 6V, high impedance V: 0.3 ~ 6V, high impedance | AC Cord Mounting kit (1 set) SPACER G: TMX13917, TMX13919 B, R: TMX13918, TMX13920 |
| Screen Size: | 1270 ~ 3048mm (50 ~ 120 inch) | Dimensions: |
| Throw Distance: | 50" (1524 mm) Picture size: 65 3/4 inches (1670 mm) | Height: 290 mm (11 13/32 inch) Width: 576 mm (22 11/16 inch) Depth: 60.0 mm (23 29/32 inch) |
| | | Weight: 77 lbs. (35 kg) |

Specifications are subject to change without notice.
 Weight and dimensions shown are approximate.

Panasonic

Matsushita Electric Trading Co., Ltd.
 P.O. Box 288, Central Osaka Japan

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FEATURES

- 1 Superb bright picture: High luminance output:
500 lumens (typical, at white peak)
- 2 Superb resolution: 1000 Lines (RGB) (typical),
650 Lines (Video) (typical)
RGB character reproduction:
equivalent to 2000 characters
(90 x 25)
- 3 Compact size and light weight (35 kg, 77 lbs), for easy
placement/installation.
- 4 Compatibility with various signal input sources:

| | |
|--------------|--------------|
| VTR/VCR | Video Disk |
| Video Camera | RGB Computer |
| TV Tuner | |
- 5 Improved raster quality:
High voltage regulation characteristic: $0.3 \text{ M}\Omega$
- 6 Ceiling/floor installation and front/rear projection easily
selectable.
 - Ceiling mount/front projection
 - Ceiling mount/rear projection
 - Floor placement/front projection
 - Ceiling mount rear projection with mirror
 - Floor placement rear projection with mirror
- 7 Wide-range computer compatibility
- 8 Four broadcast system capability
PAL, SECAM, NTSC and M-NTSC 4.43

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. It is advisable to use an isolation transformer in the AC line supply before servicing this model.
2. When servicing observe the original lead dress, especially in the high voltage circuit. In case of a short circuit, replace every part which has overheated.
3. After servicing observe that all protective devices such as insulation barriers, fish paper, shields, isolation networks and fuses are properly installed.
4. Before turning the receiver on, the resistance between the B+ line and chassis ground should be checked. Connect the \ominus side of an ohmmeter to the B+ line and the \oplus side to chassis ground.

Each line should have more resistance than specified, as follows:

| B+ (B-) Line | Minimum Resistance |
|--------------|--------------------|
| 206V | 10k Ω |
| 116V | 3k Ω |
| 27V | 300 Ω |
| 17V | 200 Ω |
| 12V | 100 Ω |
| 10V | 3 Ω |
| * -17V | 150 Ω |

* — Side to ground

5. If the set is not intended to be used for a long time, the power cord should be unplugged from the AC line outlet.
6. Potentials, as high as 32.5 kV are present when this set is in operation. Removal of the covers involves the danger of a shock hazard from the set's power supply. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high-voltage equipment.
7. Always discharge the anode of the projection tube to the set chassis before handling the tube.
8. After servicing, make the following leakage current checks to prevent a shock hazard.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two plug prongs.
2. Turn on the set.
3. Measure the resistance value with an ohmmeter between the jumpered AC plug and each exposed metallic part such as screwheads, input terminals, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 490 k Ω and 9 M Ω . When the exposed metal does not have a return path to the chassis, the reading must be infinite.

LEAKAGE CURRENT HOT CHECK (See Fig. 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 2 k Ω , 10W resistor, in series with an exposed metallic part on the receiver and an earth such as a water pipe.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 1.4 volts RMS. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

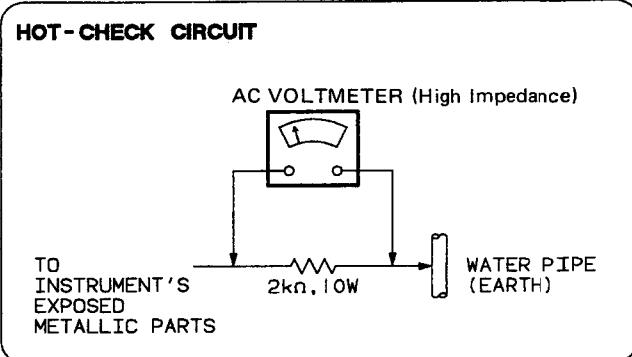


Fig. 1

X-RADIATION

WARNING: The potential source of X-Radiation in the color Projection System is the High Voltage section and the projection tubes.

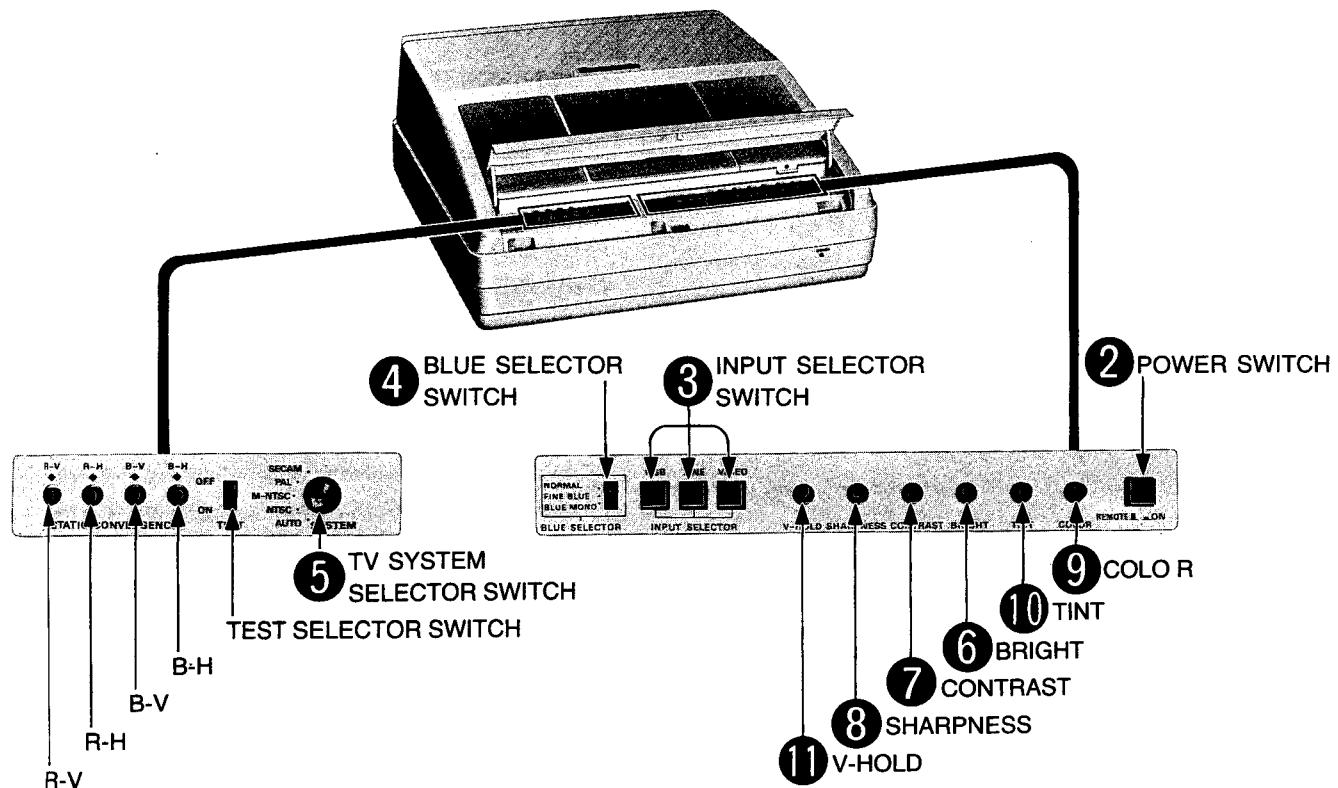
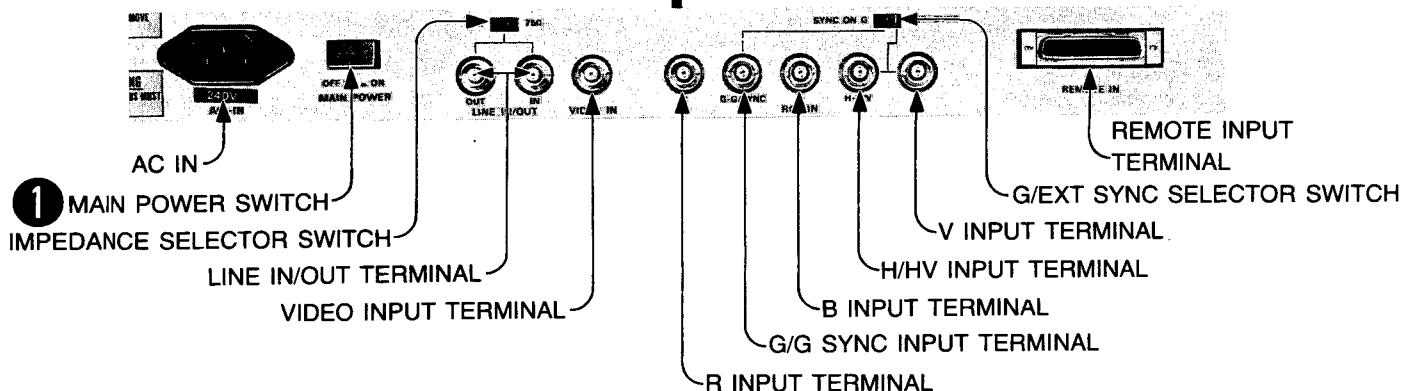
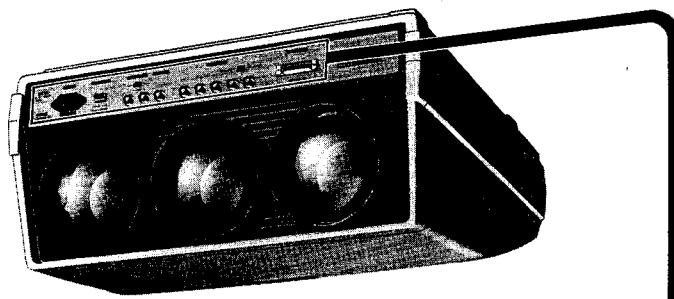
NOTE: It is important to use an accurate, periodically calibrated high voltage meter.

1. Turn the Brightness control fully counterclockwise.
2. Measure the High Voltage. The high voltage meter should indicate $32 \text{ kV} \pm 0.5 \text{ kV}$. If the upper meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure. (Refer to high voltage adjustment in the manual.)
3. To prevent an X-Radiation possibility, it is essential to use the specified projection tube only.
4. To prevent exposure to X-Radiation, the projection tube shield must be kept in place with power applied to the set.

WARNING: When using a projection tube test jig for service, ensure that jig is capable of handling 32.5 kV without causing X-Radiation.

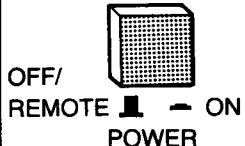
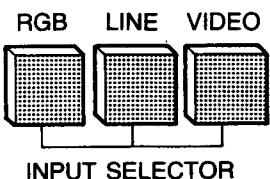
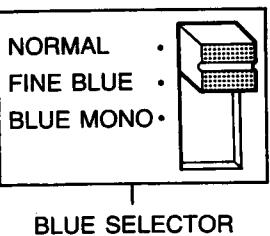
LOCATION OF CONTROLS, OPERATION AND CONNECTING OPTIONAL EQUIPMENT

LOCATION OF CONTROLS

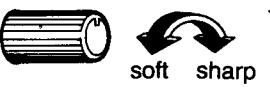
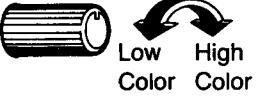


OPERATION

To operate the projector switches ① and ② must be turned ON, and switch ③ must be set to the proper input signal type. **Note:** When the separately supplied remote controller (ET-12R) is connected to the video projector, switches ② through ④ and ⑥ through ⑩ are inoperable. Please use the remote controller for these functions.

| No. | Switch. | PURPOSE |
|-----|---------------------------|--|
| 1 | MAIN POWER SWITCH |  Switches main power supply ON/OFF. |
| 2 | POWER SWITCH |  Power ON/OFF switch. This switch is set to the OFF position, when the remote control is in use. |
| 3 | INPUT SELECTOR SWITCHES |  INPUT SELECTOR VIDEO...Push this button to view signals input via the VIDEO input terminal. LINE ...Push this button to view signals input via the LINE input terminal. RGB ...Push this button to view signals input via the RGB input terminal. |
| 4 | BLUE SELECTOR SWITCH |  BLUE SELECTOR NORMAL ...Normal blue. FINE BLUE ...A finer, easier-on-the-eye, blue. BLUE MONO...White picture on a blue back ground. Note: When Linear or TTL RGB signals are input at inappropriate levels, the FINE BLUE and BLUE MONO modes might not operate properly. |
| 5 | TV SYSTEM SELECTOR SWITCH |  SYSTEM SECAM . PAL . M-NTSC . NTSC . AUTO . This switch is normally set at AUTO. However, if the picture quality is bad due to the use of dubbed tapes, etc., reception may not be satisfactory. In that case, set the switch to the appropriate input signal using a screwdriver. |

USE OF CONTROLS

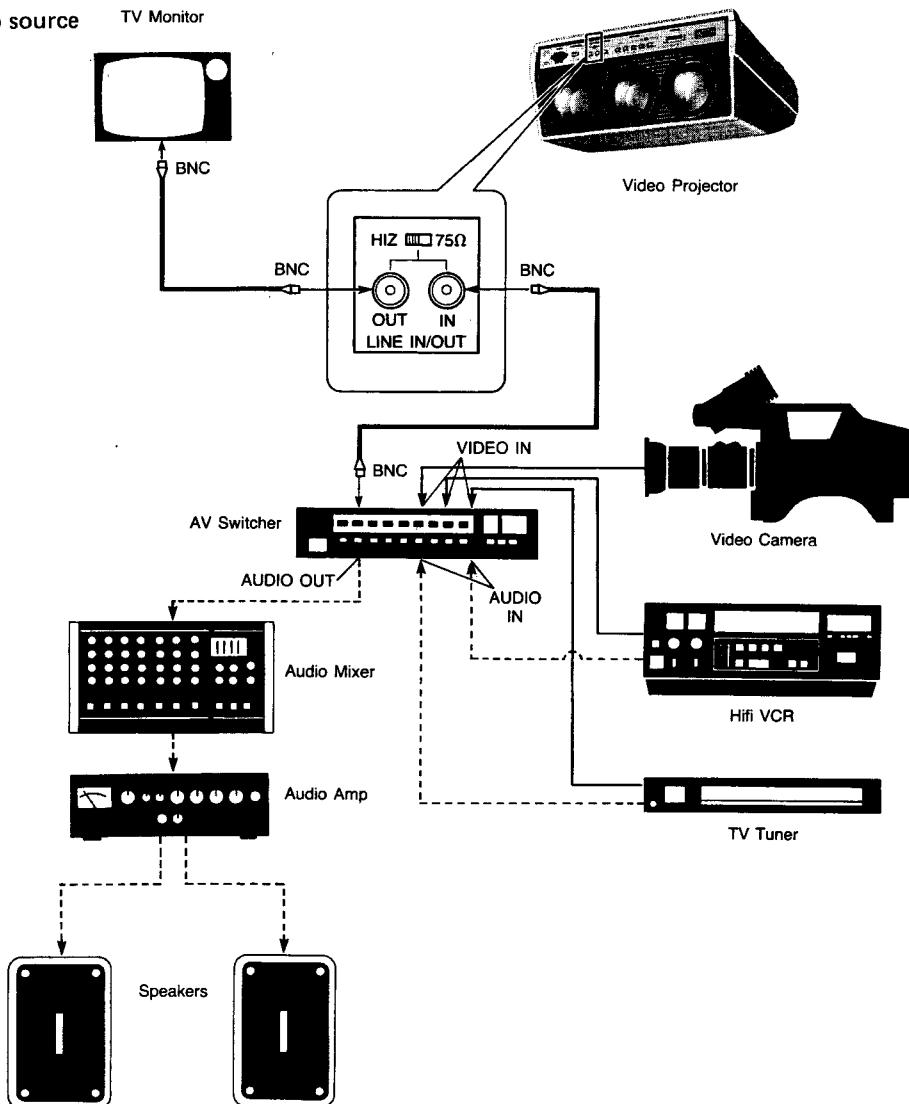
| | | | |
|----|-----------|---|--|
| 6 | BRIGHT |  | The click-stop indicates standard brightness. Adjust to the appropriate brightness level for current viewing conditions. Decrease Increase |
| 7 | CONTRAST |  | Adjust to a desirable color intensity. Decrease Increase |
| 8 | SHARPNESS |  | To obtain a sharper picture rotate the control clockwise. For a softer picture rotate the control counter-clockwise. soft sharp |
| 9 | COLOR |  | Adjust to a comfortable viewing level, a slightly less intense picture is easier on the eyes. Low Color High Color |
| 10 | TINT |  | Adjust for proper skin tone. red green |
| 11 | V-HOLD |  | If the picture rolls, as shown, adjust the control UP or DOWN until it stabilises. UP DOWN |

PT-102N/GN/AN/SN

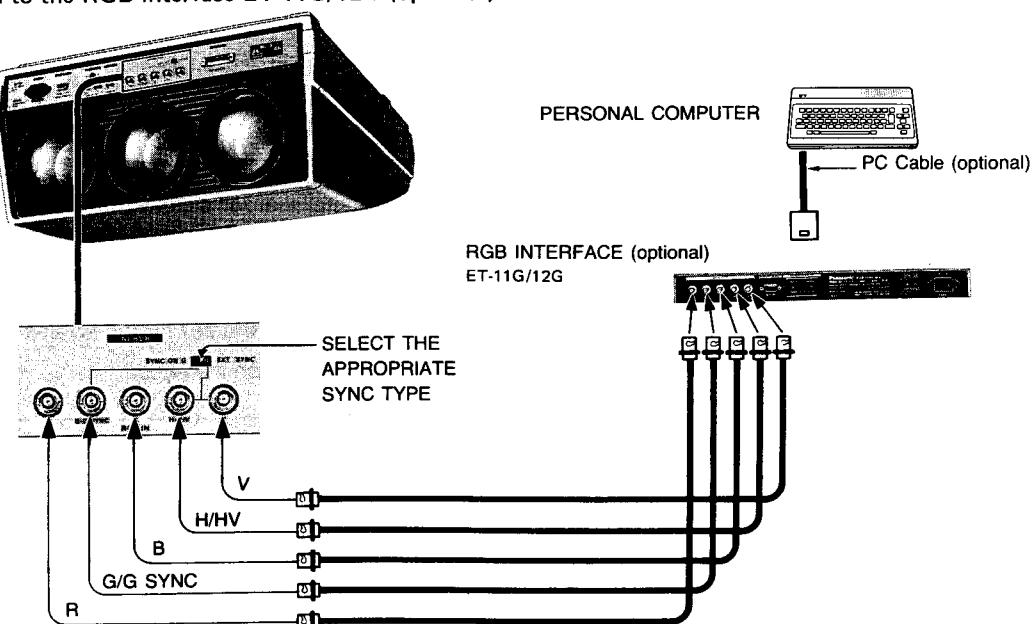
CONNECTING OPTIONAL EQUIPMENT

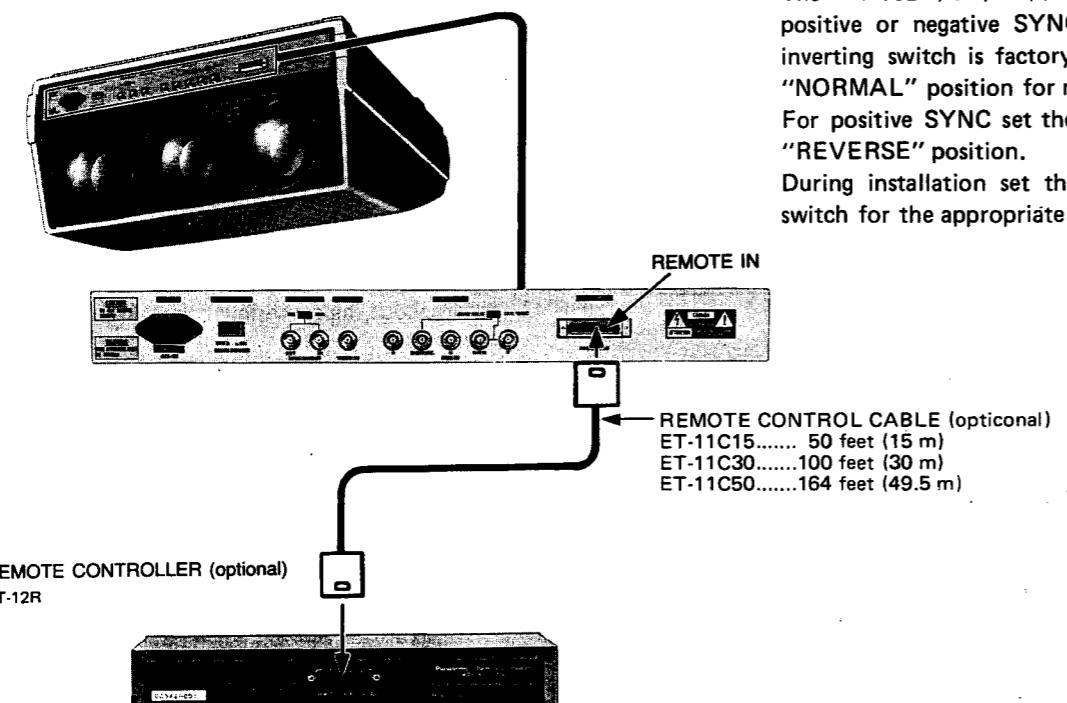
Connect optional equipment (example) according to following illustration.

CASE 1: Connection to a video source TV Monitor



CASE2: Connection to the RGB interface ET-11G/12G (optional)



CASE 3: Connection to the remote controller ET-12R (optional)

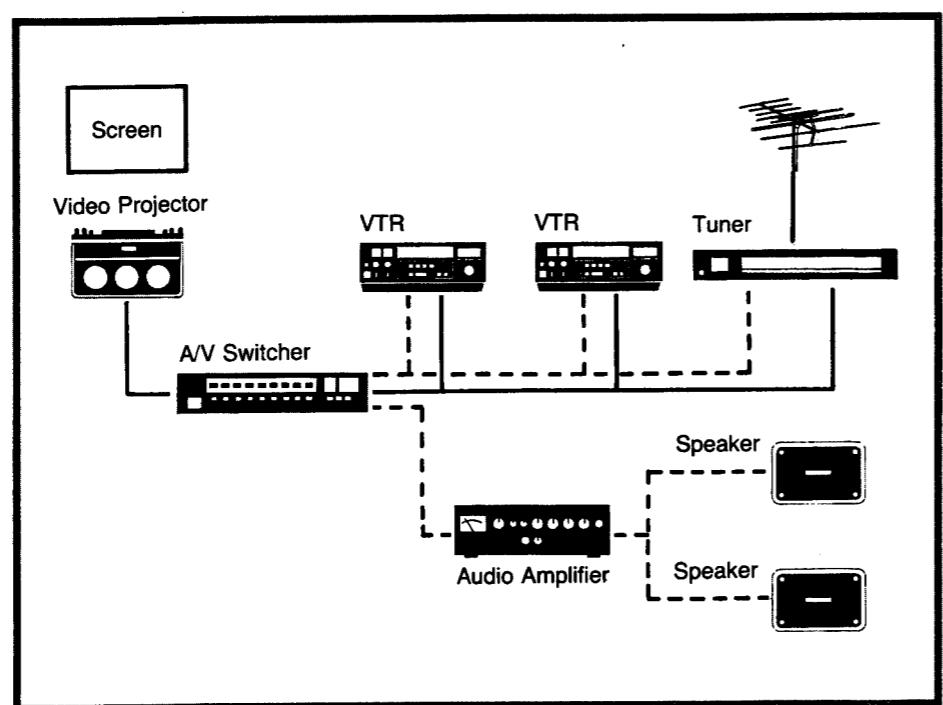
EXAMPLE 1

Presentation System

This is the most orthodox VTR playback system. Various variations can be developed on this system according to the required applications.

Applications:

- Conference Rooms
- Classrooms
- Public Areas



— 7 —

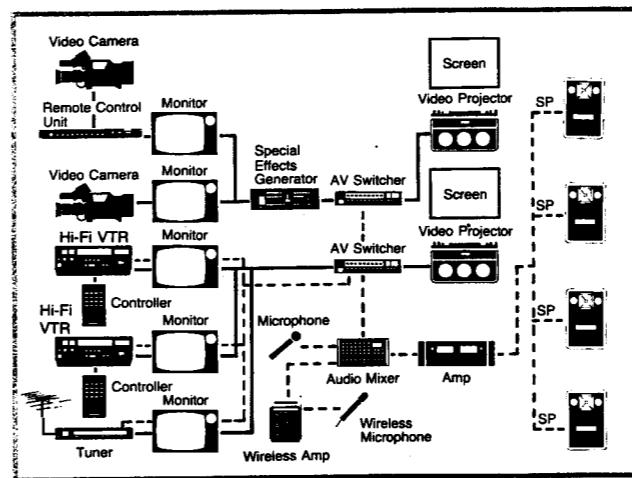
EXAMPLE 2

Entertainment System 1

This system is ideal for use for parties, ceremonies, etc. to be held in large places. Great effects are possible with the powerful video images from colour video projectors, when combined with video cameras and audio equipment.

Applications:

- Banquet Halls
- Lounges Discos



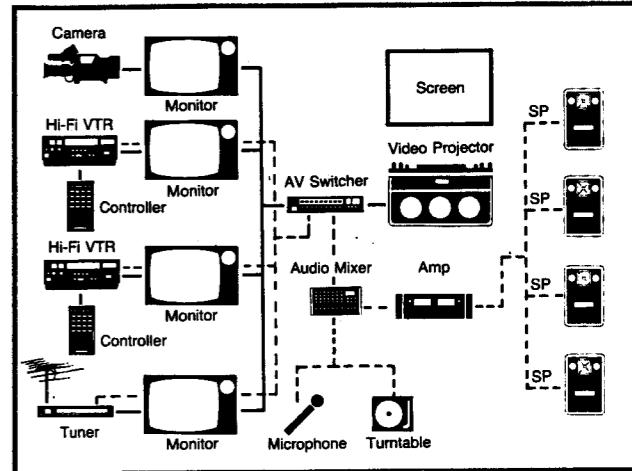
EXAMPLE 3

Entertainment System 2

This system is particularly suited to such recreational facilities as bars, restaurant, dance clubs, etc. A wide variety of atmospheric effects can be produced. When used together with stereo sound, a relaxed aura of "background video" and "mood" music, or dynamic video images with music with a beat to match.

Applications:

- Lounges Discos
- Restaurants



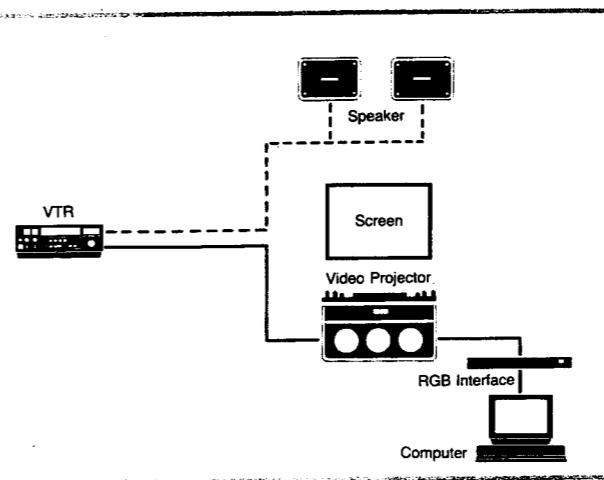
EXAMPLE 4

Business Application

This system is designed to concentrate on data presentations for business, conferences, showrooms, etc. Its superb resolution and capacity to match various types of personal computers make it ideal for upgrading office-automation systems and diversified video/data services.

Applications:

- Conference Rooms
- Training Areas
- Information Displays



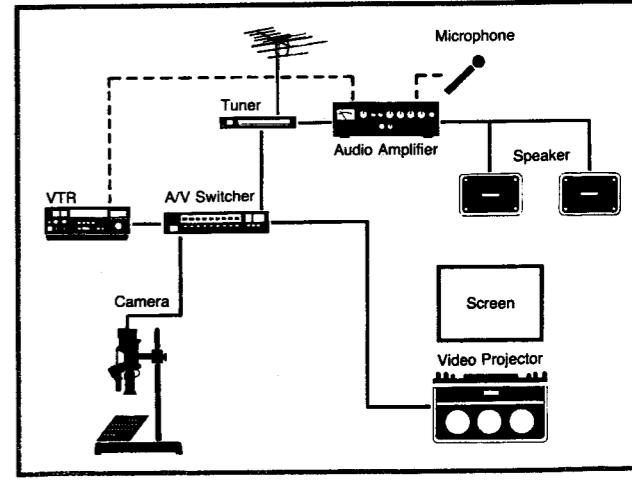
EXAMPLE 5

Educational System

Ideal for a wide range of educational activities, particularly as an effective teaching aid.

Applications:

- Classrooms
- Auditoriums
- Lecture Halls



DISASSEMBLY INSTRUCTIONS

1. HOW TO REMOVE THE TOP COVER

- 1) Open the cover of control panel.
- 2) Remove 3 screws **A** in fig. 2.
- 3) Then pull the Top Cover toward the back side of the deck and carefully lift it for removal.

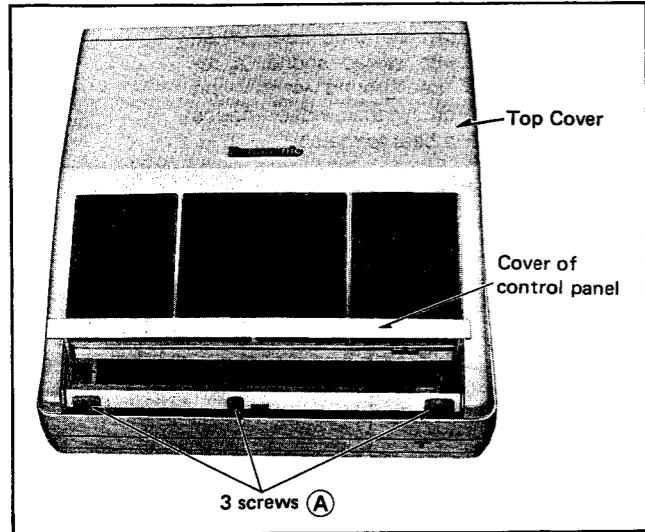


Fig. 2

2. HOW TO REMOVE THE LENS GRIL

- 1) Remove 4 screws **B** in fig. 3.
- 2) Remove the Lens Gril.

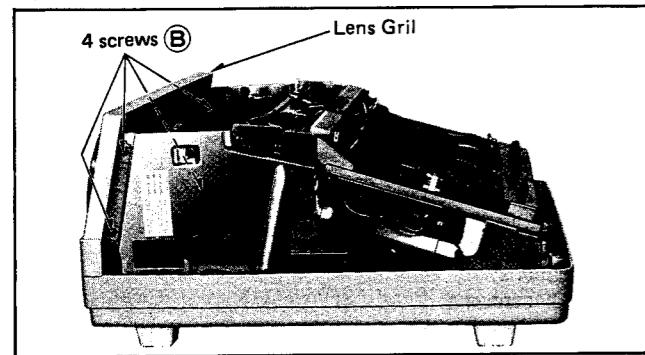


Fig. 3

3. HOW TO REMOVE THE CONVERGENCE CONTROL COVER

- 1) Open the cover of control panel.
- 2) Remove a 1 screw **C** in fig. 4.
- 3) Then pull the Convergence Control Cover toward the control panel side for removal.

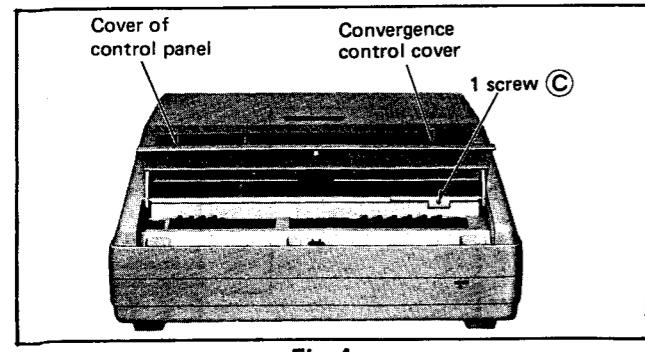


Fig. 4

4. HOW TO OPEN THE PRINTED CIRCUIT BOARD

1) C and D, V-Boards

- Loosen 2 screws **D** to counterclockwise by 90° in fig. 5.
- Then lift the rear of the chassis to open the "C", "D", V-Board.

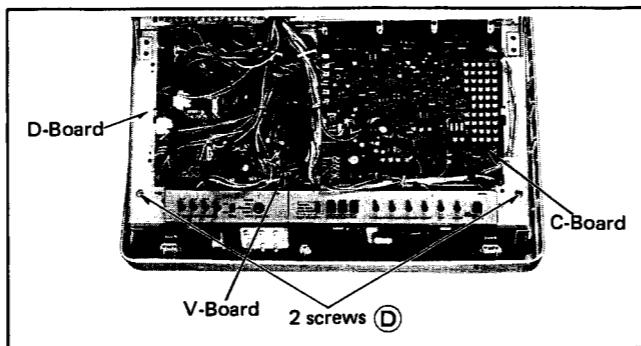


Fig. 5

2) "A" · "B"-Boards

- Remove a 1 screw **E** in fig. 6, and remove the P.C-Board fixing metal.
- Then carefully pull and lift the "A" and "B" Boards for removal.

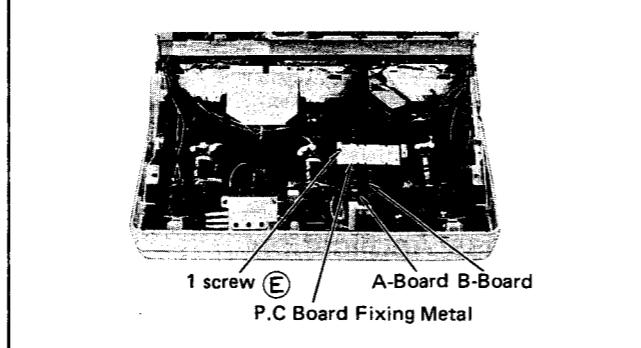


Fig. 6

3) "F"-Board

- Remove a 1 screw **F** in fig. 7, then open the F"-Board.

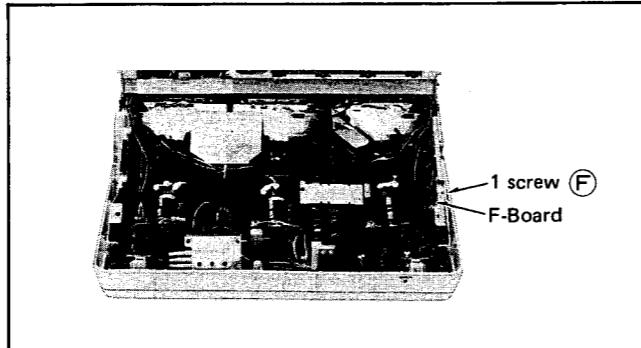


Fig. 7

4) "M"-Board

- Remove 3 screws **G** in fig. 8.
- Then pull the "M"-Board toward the back side of the deck, and carefully lift it to open the "M"-Board.

5) "G"-Board

- Remove 2 screws **H** in fig. 8.
- Then pull the "G"-Board toward the back side of the deck, and carefully lift it to open the "G"-Board.

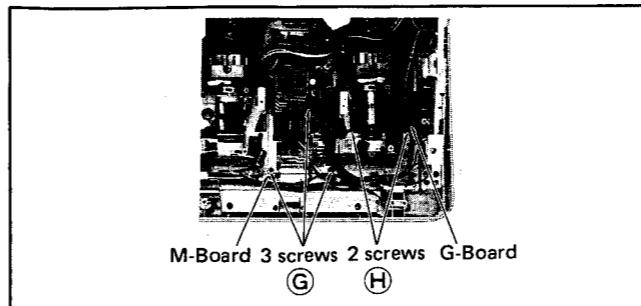


Fig. 8

6) "K"-Board

- Remove the Front Panel.
- Then carefully pull and lift the Terminal Panel for removal in fig. 9.
- Remove 2 screws **I** in fig. 10.
- Then lift and pull out the "K"-Board.

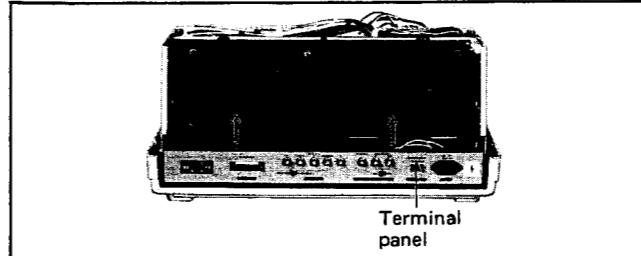


Fig. 9

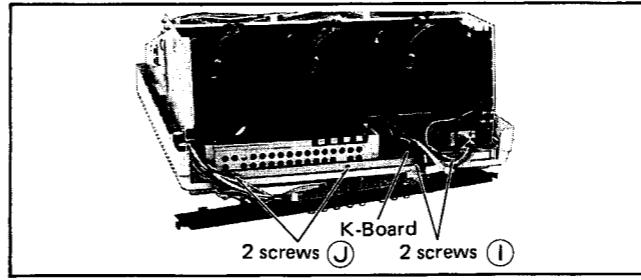


Fig. 10

7) "P" and "Q"-Boards

- Remove the Front Panel and Terminal Panel.
- Remove 2 screws **J** in fig. 10.
- Remove 4 screws **K** in fig. 11, and lift the box cover.
- Then open the "P" and "Q"-Boards.

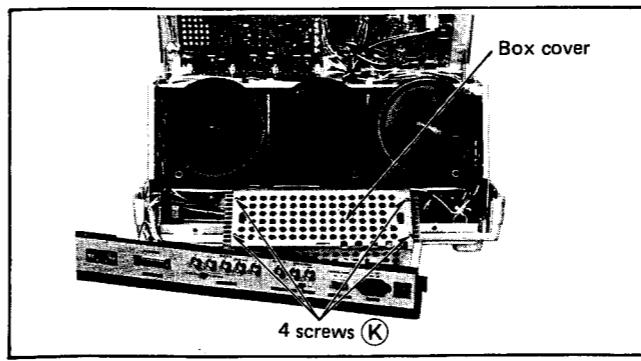


Fig. 11

5. HOW TO REMOVE THE PROJECTOR TUBE (WHEN RED)

- 1) Remove the two retaining 2 screws **L** from the tube shown in fig. 12.
- 2) Remove the lens grill shown in fig. 3. (Remove 4 screws **B**).
- 3) Remove the anode lead **M** from the high voltage distributor shown in fig. 13.
- 4) Remove the LR printed circuit board **N** in fig. 13.
- 5) Remove the retaining screw of the neck shield **O** and remove the neck shield **P** in fig. 13.
- 6) Remove the retaining screw of the deflecting coil **Q** and draw out the centering magnet **R** and the deflecting coil **S** in fig. 13.
- 7) Remove the grounding lead from the tube.
- 8) Remove the 4 retaining screws **T** from the tube and draw it out shown in fig. 14.

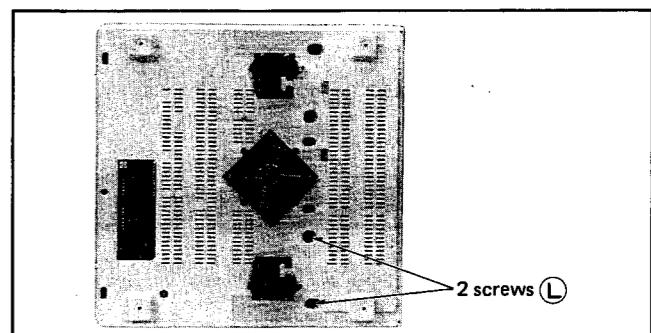


Fig. 12

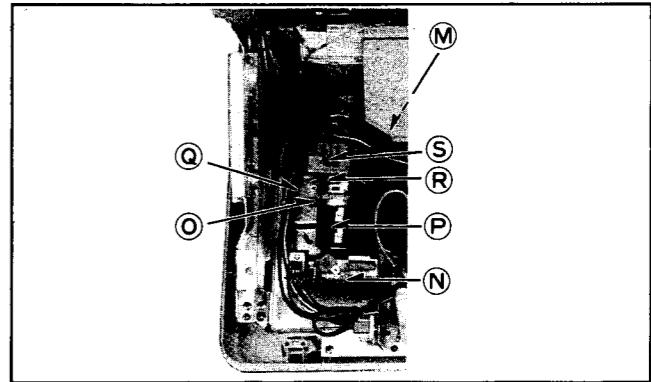


Fig. 13

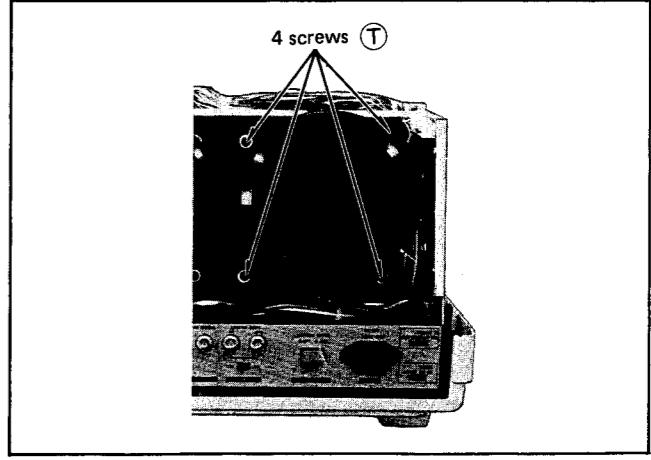


Fig. 14

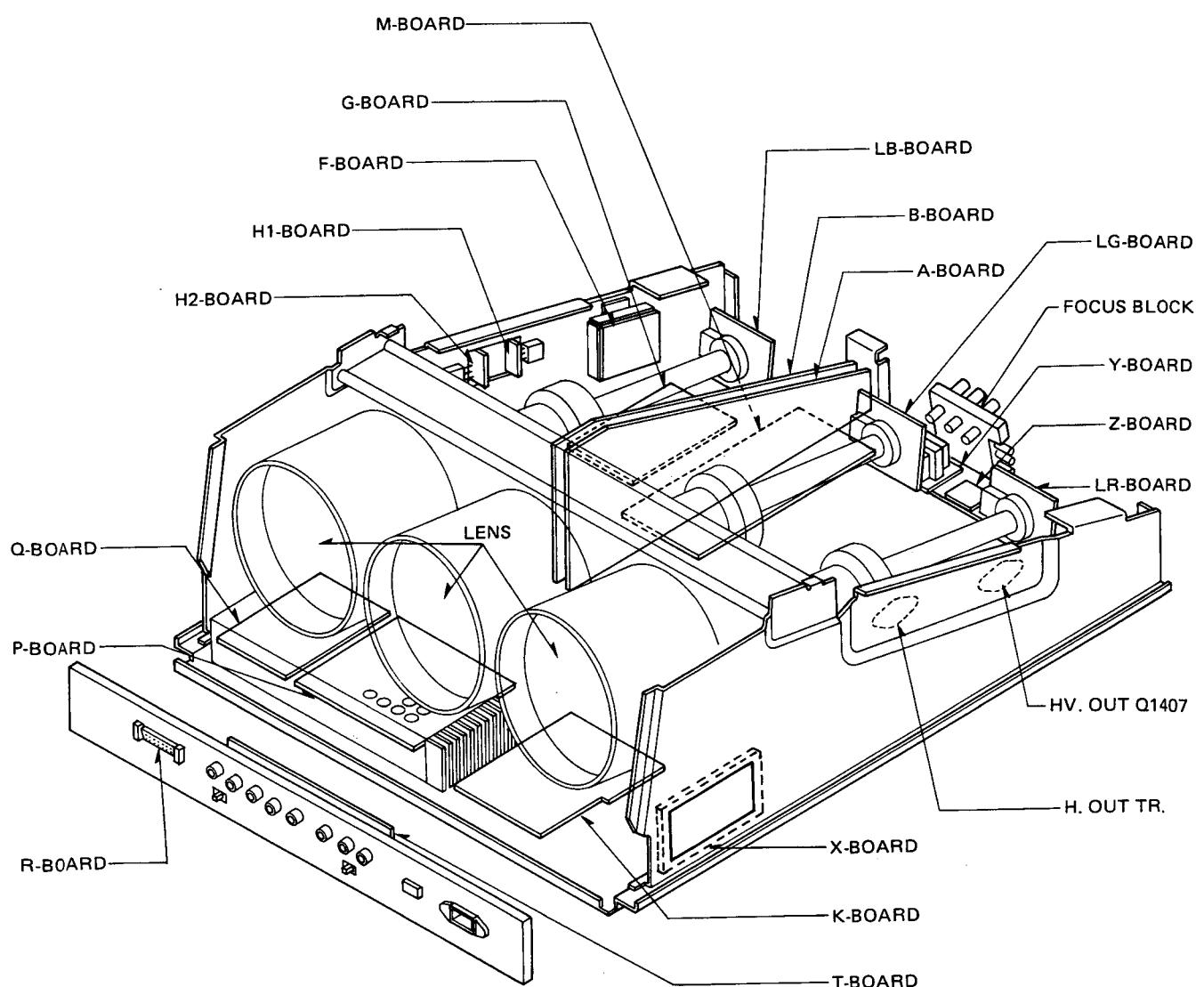
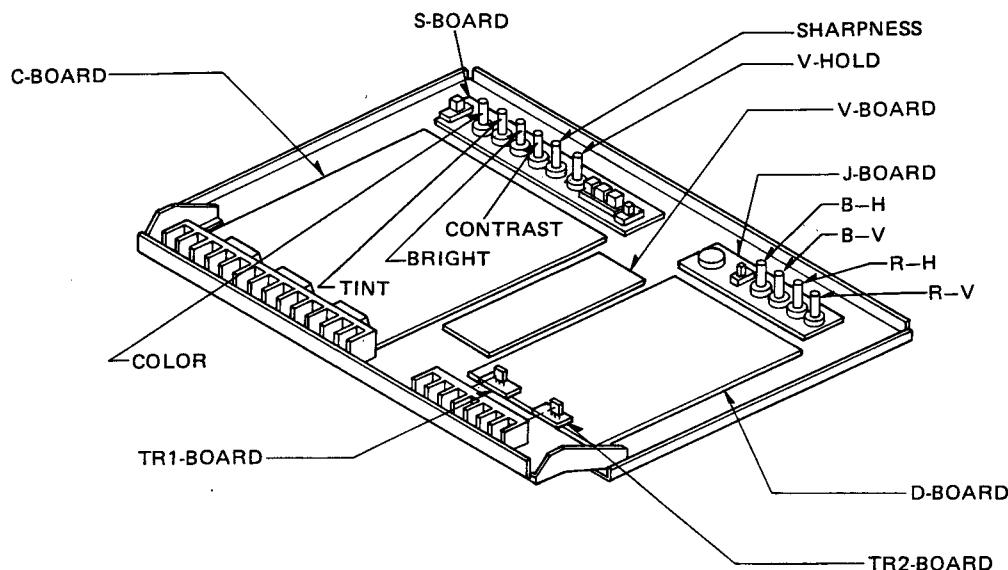
MAIN PARTS LOCATION CHART

Fig. 15

CAUTIONS FOR SERVICING

HORIZONTAL OSC. DISABLE CIRCUIT TEST

This test must be made as a final check before the set is returned to the customer.

1. With the chassis case removed, supply a nominal 120V AC to the set, and turn the set on.
2. Set the customer controls to normal operating positions.
3. Locate Q1404 and short it's collector to the emitter with a jumper wire. Confirm that this shorts the high voltage and that the raster disappears.
4. If this does not occur, the Horizontal Osc. Disable Circuit is not operating. Follow the Horizontal Oscillator Disable Circuit Repair Procedures before the set is returned to the customer.

NOTE: The power on/off switch must be turned off and then on to restore operation.

REPAIR PROCEDURES OF THE HORIZONTAL OSCILLATOR DISABLE CIRCUIT

1. Connect a DC voltmeter between capacitor C1413 + on the D-PCB and chassis ground. If approximately 150V is not present at that point find the cause. Check R535, R591, R1430, R534, C1413 and D1408.
2. Connect a DC voltmeter between capacitor C518 + on the C-PCB and chassis ground. C518 + potential varies from nearly 0V approx to nearly 4V approx when shorting Q1404 (C-E). If this does not occur, find the cause. Check R530, R531, R537, R538, R539, R540, R541, R542, R543, R544, C513, C518, C519, C520, D507, Q510, Q511 and Q512.
3. Carefully check the above specified parts and related circuits and parts. When the circuit is repaired, try the Horizontal Oscillator Disable Circuit Test again.
4. In case that at least one of R535, R591, R534, D507, and the FBT is replaced follow the Adjustment Procedure for the Horizontal Oscillator Disable Circuit as follows.

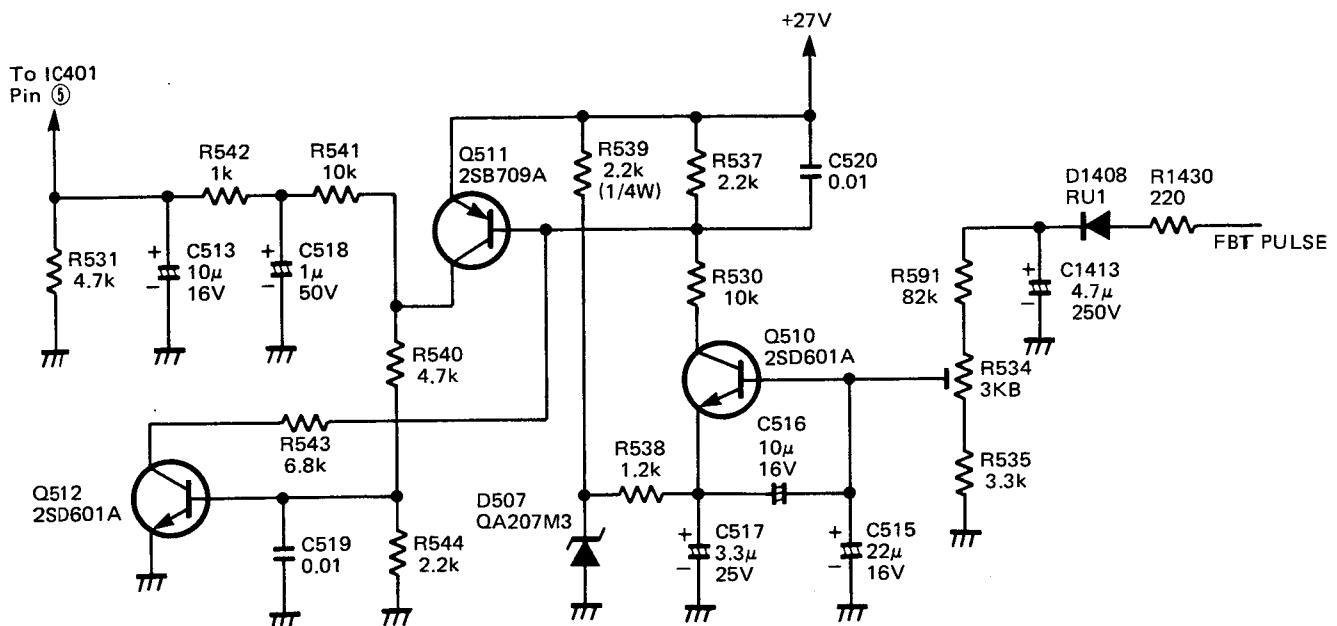


Fig. 16

ADJUSTMENT PROCEDURE OF THE HORIZONTAL OSCILLATOR DISABLE CIRCUIT

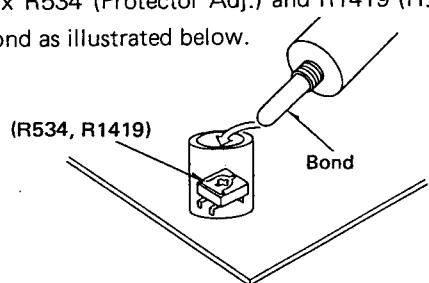
Replace R534 (Protector Adj.) and R1419 (HV Adj.) before this adjustment. But R534 (Protector Adj.) and R1419 (HV Adj.) are only manufactures specified parts.

- Set the following controls at the position indicated.
Input Selector SW. (S3003) LINE
TV-System Selector SW. (S8002) AUTO
Impedance Selector (75/HIZ) SW. (S1) HIZ
R1419 (HV Adj.) Fully clockwise
R534 (Protector Adj.) Fully Counter-clockwise
Connect the \oplus (positive) side of DC voltage meter to **TPD1** and \ominus (negative) side to **TPD2** on D-PCB.
- Turn on the Power Switch, and receive a monoscope pattern signal.
- Connect a short jumper between **TPM1** and **TPM2**.
- Tell where to connect the voltage meter and high voltage probe.
- Adjust R1419 (HV Adj.) the Brightness control and the Contrast control to obtain ($33.5 \text{ kV} \pm 0.3 \text{ kV}$) on the high-voltage meter, and obtain ($1.8\text{V} \pm 0.05\text{V}$) on the voltage meter.

CAUTION:

Use only a Static Type of High Voltage Meter which has a 5% tolerance at 40 kV.

- Adjust R534 (Protector Adj.) slowly clockwise until shut-down occurs and hold that position.
- Turn off the power switch.
- Adjust R1419 (HV Adj.) slightly clockwise.
- Turn on the power switch.
- Adjust R1419 (HV Adj.) slowly counter-clockwise until shut-down occurs High voltage should be $33.5 \text{ kV} \pm 0.5 \text{ kV}$, and $1.8\text{V} \pm 0.05\text{V}$ on the voltage meter just before shut-down.
- If the readings in step 10 are not confirmed, repeat steps 5, 6 and 7 again.
- Turn off the power switch.
- Disconnect the short jumper between **TPM1** and **TPM2**.
- Set the 75/HIZ selector SW. (S1) to 75Ω .
- Turn on the power switch, and confirm that the high voltage is $32.0 \text{ kV} \pm 0.5 \text{ kV}$.
- Confirm that the high voltage does not change by turning of the Brightness and Contrast controls.
- Fix R534 (Protector Adj.) and R1419 (H.V Adj.) with bond as illustrated below.



DISCONNECTION OF ANODE LEAD FROM THE DISTRIBUTER

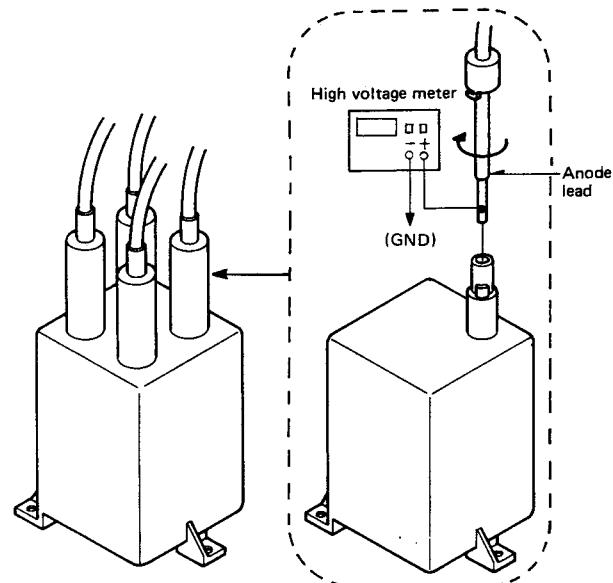


Fig. 17

X-RAY PRECAUTIONS

The front area (between the projection tube and the lens.) is enclosed by a metal box to ensure positive safety during abnormal and normal conditions when checking and doing repair work. To fully ensure safety, however, the following precautions must be observed.

- (1) Do not remove the lens.
- (2) Be sure to turn OFF the power when the lens must be removed and when you could be exposed to X-rays during cleaning and other routine servicing.
- (3) Do not remove the lens to check the projection tube for operation by watching it directly.
- (4) Do not remove the LEAD TAPE on the CRTs.
- (5) Do not remove the METAL COVER on the CRTs.

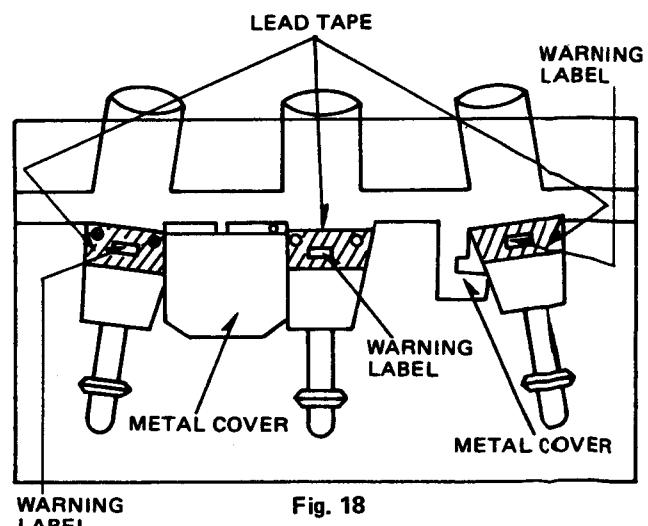


Fig. 18

FIELD ADJUSTMENTS

Note: 1. When a screwdriver is needed during adjustment, use a non-metallic screwdriver to prevent unexpected short-circuits.

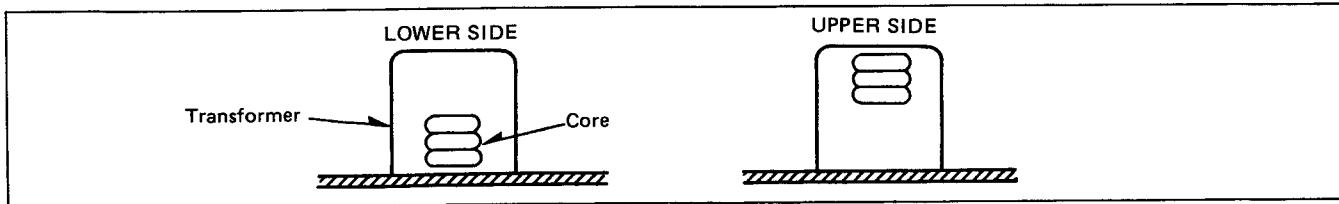


Fig. 19

1. DC VOLTAGE CONFIRMATION

- 1) Set the following controls at the positions indicated.
Brightness control VR (R3009) Minimum
Contrast control VR (R3011) Minimum
- 2) Connect a DC voltmeter between each Test Point and **TPC2** (earth).
- 3) Check below for the indicated test points and their specified voltages. (See Table 1)

| Test Points | Voltage |
|-------------------------------|---------------|
| Pin ③ of connector D14 | 115.5V ± 1.3V |
| Pin ⑥ of connector C4 | 115.5V ± 1.3V |
| Pin ⑤ of connector C4 | 26V ± 1.0V |
| Pin ② of connector C4 | 17V ± 1.0V |
| Pin ③ of connector C4 | -17V ± 1.0V |
| TPM1 | 12V ± 0.5V |

Table 1

2. HORIZONTAL CIRCUIT ADJUSTMENT

- 1) Set the following controls at the positions indicated.
Input Signal Selector SW. (S3003) VIDEO
TV-System Selector SW. (S8002) AUTO
G/EXT Sync Selector SW. (S2) Ext. Sync
NTSC H. Hold control VR (R520) Centre
PAL/SECAM H. Hold control VR (R519) Centre
RGB Horizontal Hold VR (R523) Centre
Brightness control VR (R3009) Centre
Contrast control VR (R3011) Centre
- 1)-1. Connect a Resistor Jumper ($10k\Omega$) between **TPB5** and **TPB11**.
- 1)-2. Connect a Jumper between **TPB10** and earth.

2. Transformer core position. (Application for both Field Adjustment and General Alignment.) Unless otherwise noted, a transformer core which has two tuning peak points should be adjusted at the lower position as shown in Fig. 19.

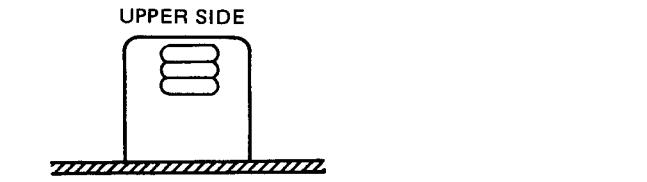


Fig. 19

2) VIDEO MODE NTSC

1. Receive a monoscope pattern signal (NTSC).
2. Connect a capacitor ($1\mu F/50V$) between **TP31** and earth.
3. Adjust the NTSC H. Hold control VR (R520) to stabilize the picture.

3) VIDEO MODE (PAL/SECAM)

1. Receive a Phillips pattern signal (PAL).
2. Connect a capacitor ($1\mu F/50V$) between **TP31** and earth.
3. Adjust the PAL/SECAM H. Hold control VR (R519) to stabilize the picture.

4) RGB MODE

1. Set the Input Signal Selector SW. (S3003) to the RGB position.
2. Receive an RGB signal from an RGB signal generator. (The horizontal frequency of the RGB signal should be in $15.750 \text{ kHz} \pm 0.25 \text{ kHz}$ range.).
3. Connect a capacitor ($1\mu F/50V$) between **TP31** and earth.
4. Adjust the RGB H. Hold control VR (R523) to stabilize the picture.

3. SUB CONTRAST ADJUSTMENT (1)

- 1) Set the following controls at the position indicated.
Colour control VR (R3002) Minimum
Sub Contrast control VR (R353) Centre
- 2) Receive a colour bar signal.
- 3) Connect an oscilloscope between **TPA14** and earth.
- 4) Adjust Sub Contrast control VR (R353) to achieve $0.7V \pm 0.05V$ on the oscilloscope as shown in Fig. 20.

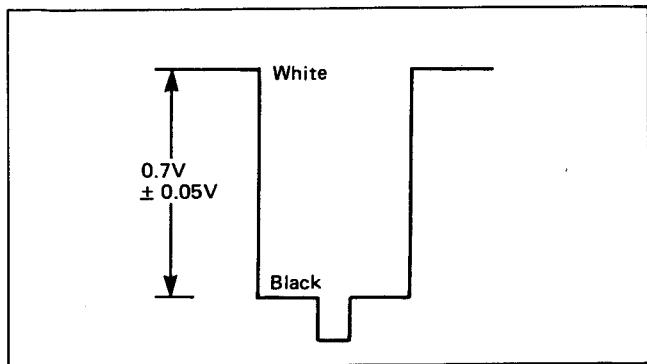


Fig. 20

4. SUB CONTRAST ADJUSTMENT (2)

1) Set the following controls at the positions indicated.

Brightness control VR (R3009) Minimum
Colour control VR (R3002) Minimum
Contrast control VR (R3011) Maximum
Sub Contrast control VR (R1103) Centre

2) Receive an NTSC colour bar signal.

3) Remove the D11 connector. (D-PCB).

4) Connect an oscilloscope between **TPB7** and earth.

5) Adjust Sub Contrast control VR (R1103) to achieve $2.5V \pm 0.2V$ on the oscilloscope as shown in Fig. 21.

6) Set Power switch to OFF position and insert the D11 connector.

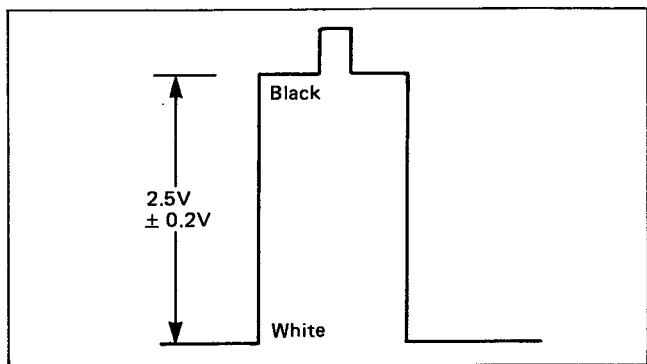


Fig. 21

5. VERTICAL LINEARITY ADJUSTMENT

1) Set the following controls and switches at the positions indicated.

Input signal Selector SW. (S3003) VIDEO
TV-System Selector SW. (S8002) AUTO
Brightness control VR (R3009) Click Stop
Contrast control VR (R3011) Maximum
Vertical Linearity control VR (R442) Centre

2) Receive an PAL Phillips pattern signal.

3) Adjust the Vertical Linearity control VR (R442) until the circle of the pattern is symmetrical from top to bottom (real circle).

6. VERTICAL HEIGHT ADJUSTMENT

Note: At the 120 inch size.

1) Set the following controls and switches at the positions indicated.

Input Signal Selector SW. (S3003) LINE
TV-System Selector SW. (S8002) AUTO
G/EXT Sync Selector SW. (S2) Ext. Sync.
Video V-Size control VR (R428) Centre
NTSC Sub V-Size control VR (R432) Centre
RGB V-Size control VR (R437) Centre
Brightness control VR (R3009) Click Stop
Contrast control VR (R3011) Maximum

2) **VIDEO MODE**

1. Receive a PAL Phillips pattern signal.
2. Adjust the Video V-Size control VR (R428) to achieve a pattern height of 1957 mm.
3. Set the Input Signal Selector SW. (S3003) to VIDEO and receive an NTSC monoscope pattern signal.
4. Adjust the NTSC Sub V-Size control VR (R432) to achieve a pattern height of 1957 mm.

3) **RGB MODE**

1. Set the Input Signal Selector SW. (S3003) to RGB.
2. Receive an RGB signal from an RGB signal generator.
3. Adjust the RGB V-Size control VR (R437) to achieve a pattern height of 1957 mm.

7. HORIZONTAL WIDTH ADJUSTMENT

1) Set the following controls and switches at the positions indicated.

Input Signal Selector SW. (S3003) VIDEO
TV-System Selector SW. (S8002) AUTO
G/EXT Sync Selector SW. (S2) Ext. Sync.
Video H-Size control VR (R1541) Centre
RGB H-Size control VR (R1536) Centre
Brightness control VR (R3009) Click Stop
Contrast control VR (R3011) Maximum

2) **VIDEO MODE**

1. Receive an PAL Phillips pattern signal.
2. Adjust the Video H-Size control VR (R1541) to achieve a pattern width of 2609 mm.

3) RGB MODE

1. Set the Input signal selector SW. (S3003) to RGB.
2. Receive an RGB signal from an RGB signal generator.
3. Adjust the RGB H-Size control VR (R1536) to achieve a pattern width of 2609 mm.

8. RASTER GEOMETRIC ADJUSTMENT

- 1) Set the following controls and switches at the positions indicated.

Input Signal Selector SW. (S3003) VIDEO
 Brightness control VR (R3009) Click Stop
 Contrast control VR (R3011) Maximum
 Red, Blue Static convergence controls
 VR (R8001 ~ R8004) Centre
 Green Static convergence controls
 VR (R7005 ~ R7006) Centre
 Red, Blue Dynamic convergence controls VR (R871, R873, 876, 878, 880, 882, 884, 885, 887, 890, 892, R894, 896, 898, 900, 901, 904, 905, 909, 911, 913, R915, 917, 919, 921, 923, 924, 926, 928, 930, 932, R935, 937, 939, 941, 943, 7012, 7013). Centre
 Red, Blue Top and Bottom Pincushion compensation VRs (R870, R907). Centre
 Green Top and Bottom Pincushion Compensation VR (R788). Centre
 T/B incusion Waveform Adjustment VRs (R955, R958, R7036) Centre
 TV-System Selector SW. (S8002) AUTO
 2) Receive an NTSC cross hatch pattern signal.
 3) Connect an oscilloscope between **TPC5** and earth.
 4) Adjust R955, R958 and R7036 to achieve maximum amplitude and confirm that both side of the bow tie pattern are symmetrical (A, B in Fig. 22).

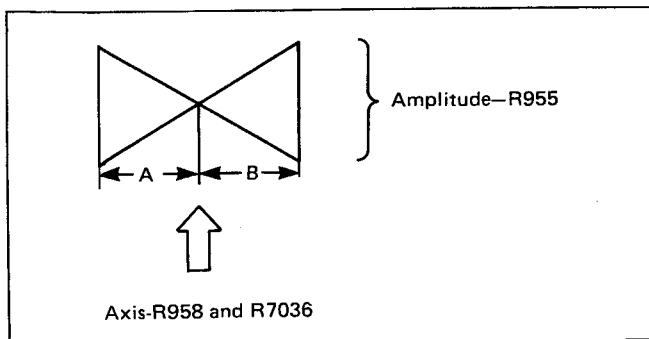


Fig. 22

- 5) Disconnect oscilloscope from **TPC5**.
- 6) Connect an oscilloscope between **TPC1** and **TPC2** (earth).
- 7) Adjust R787 and R791 to achieve the correct waveform as shown in Fig. 23.
 - a. Both sides of bow tie wave should be symmetrical.
 - b. Peak points should be at the same level.

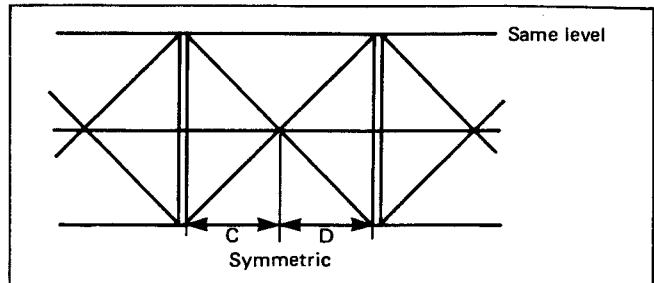


Fig. 23

- 8) Cover the Red and Blue lenses with lens covers.
- 9) Adjust Green Top and Bottom Pincushion Compensation VR (R788) to obtain straight horizontal Green lines from top to bottom.
- 10) If adjusting R788 is insufficient, adjust R7036, R958 and R788 accordingly by the following procedures. (Refer to Fig. 24-A, 24-B).

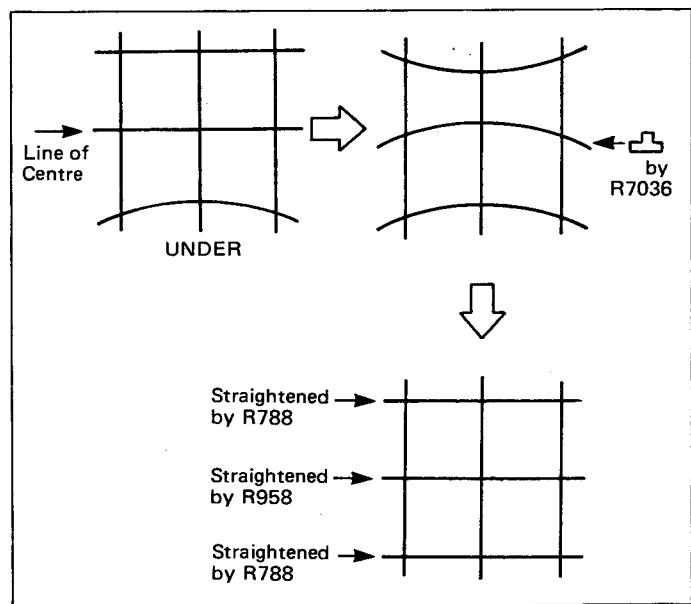


Fig. 24-A

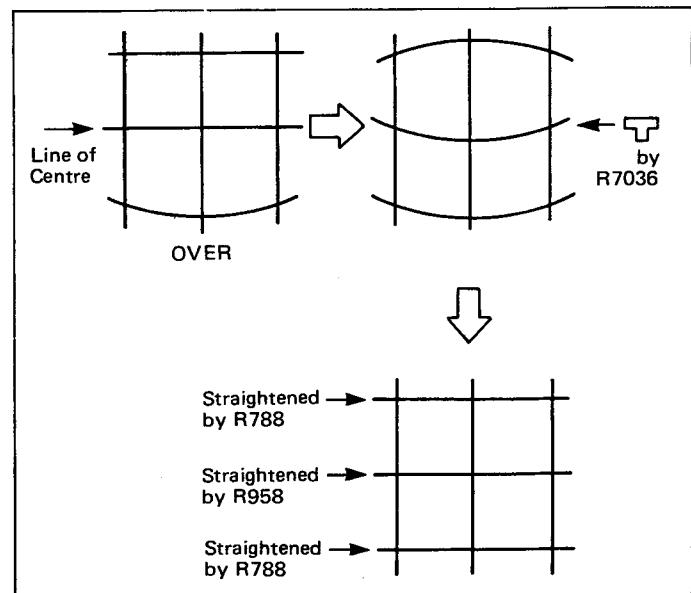


Fig. 24-B

11) Adjust R745 to get straight horizontal lines from top to bottom as shown in Fig. 25.

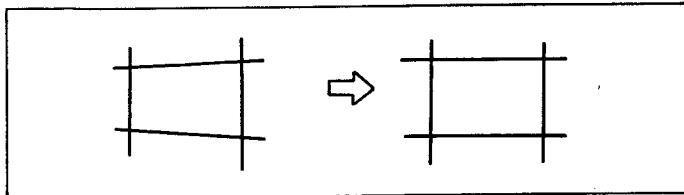


Fig. 25.

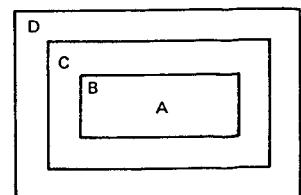
9. CONVERGENCE ADJUSTMENT

- 1) Demagnetize the chassis and CRTs using a degaussing coil.
- 2) Adjust all three deflection yokes to converge all horizontal lines at the centre of the screen. Deflection yokes be inserted all the way towards the front side of the CRT.
- 3) Adjust each centring magnet to set the pattern centre to at the geometric centre of the screen.

- 4) Readjust the deflection yoke if any of the horizontal lines are tilted.
- 5) Receive an RGB signal and turn on the TEST SW. (S8001).
- 6) Cover the Blue lens with the lens cover.
- 7) Adjust the convergence as follows.
- 8) The following controls are located on the convergence control board.
- 9) Adjust each of the red convergence adjustment controls in the order of the instructions ⑤ to ⑯ in the figure so that the red pattern matches the green pattern.
- 10) Remove the lens cover from the Blue lens and cover the Red lens.
- 11) Adjust each of the blue convergence adjustment controls in the order of the instructions ⑯ to ⑰ in the figure so that the blue pattern matches the green pattern.
- 12) Return the red CRT to operation.

| Order of Adjustment VR'S | | | | | Function of Adjustment VR'S | | | | |
|--------------------------|------|------|------|------|-----------------------------|-------|------|-------|-------|
| G | B-H | B-V | R-H | R-V | | | | | |
| MAIN | | | | | | | | | |
| (1) | (27) | (26) | (6) | (5) | R788 | R928 | R907 | R892 | R870 |
| (2) | (30) | (32) | (9) | (11) | R7011 | R930 | R909 | R894 | R871 |
| (3) | (31) | (33) | (10) | (12) | R944 | R932 | R911 | R896 | R873 |
| (4) | (34) | (28) | (13) | (7) | R745 | R935 | R913 | R898 | R876 |
| | (35) | (29) | (14) | (8) | R937 | R915 | R900 | R890 | R878 |
| SUB1 | | | | | | | | | |
| | (40) | (36) | (19) | (15) | R939 | R917 | R901 | R880 | |
| B-H | (46) | (41) | (37) | (20) | R7024 | R919 | R904 | R882 | |
| | (42) | (38) | (21) | (17) | R941 | R921 | R905 | R884 | |
| R-H | (25) | (43) | (39) | (22) | R943 | R923 | R890 | R885 | |
| G-STATIC | | | | | | | | | |
| | (48) | (47) | (45) | (44) | R7006 | R7005 | R924 | R7013 | R887 |
| | | | | | | | | | R7012 |

CONVERGENCE LIMITS :
(in mm from centre of raster centre)



| Inch Zone | 50" | 70" | 100" | 120" |
|-----------|-----|-----|------|------|
| A | 0.4 | 0.5 | 0.7 | 1 |
| B | 3.5 | 5 | 7 | 9 |
| C | 6 | 9 | 12 | 15 |
| D | 6 | 9 | 12 | 15 |

[mm]

10. GK DRIVE ADJUSTMENT

- 1) Set the following controls at the position indicated.
 Brightness control VR (R3009) Click Stop
 Colour control VR (R3002) Minimum
 Contrast control VR (R3011) Maximum
- 2) Remove the D11 connector (D-PCB).
- 3) Receive an NTSC colour bar signal.
- 4) Connect the oscilloscope between **TPLG1** and earth.
- 5) Adjust Brightness control VR (R3009) to control the black level, less than B+ (205V) level.
- 6) Adjust G-Drive control VR (R1801) to achieve $130V \pm 3V$ as shown in Fig. 26.

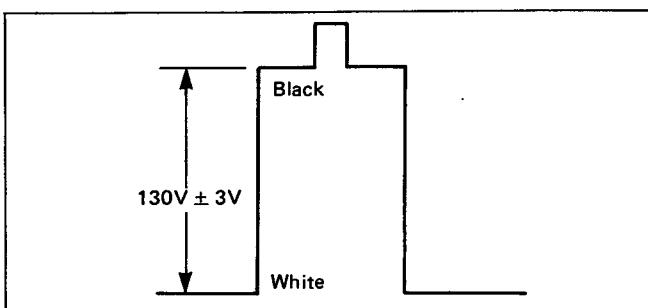


Fig. 26

- 7) Set Power switch to OFF position and insert the D11 connector.

11. CUT OFF ADJUSTMENT

- 1) Set the following controls at the positions indicated.
 Colour control VR (R3002) Minimum
 Brightness control VR (R3009) Click Stop
 Screen VR (FOCUS SCREEN VR) Minimum
- 2) Receive an NTSC colour bar signal.
- 3) Set Service switch (S10) to Service position.
- 4) Connect oscilloscope to **TPLG1** and earth.
- 5) Adjust Sub Contrast control VR (R353) such that voltage meter reading is $182V \pm 2V$ at the horizontal scanning period.

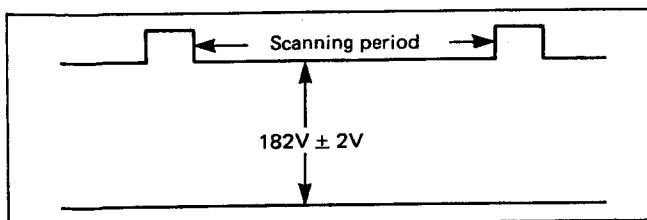


Fig. 27

12. WHITE BALANCE ADJUSTMENT

Note: Do not adjust Focus screen VR (G) and G drive VR (R1801).

- 1) Receive an white pattern signal.
- 2) Set service switch (S10) to the SERVICE position.

- 3) Set the Focus screen VR (R/B) to the minimum position.
- 4) Adjust Brightness control VR (R3009) so that the picture tube (G) becomes faint light.
- 5) Set service switch (S10) to the NORMAL position and adjust high light, white balance with R drive VR (R1701) and B drive VR (R1901) controls.

13. SUB BRIGHTNESS ADJUSTMENT AND ABL CONFIRMATION

- 1) Set the following controls at the positions indicated.
 Brightness control VR (R3009) Click Stop
 Contrast control VR (R3011) Minimum
 Sub Brightness control VR (R1107) Minimum
- 2) Connect a digital voltmeter between **TPD1** (+) and **TPD2** (-).
- 3) Receive a monoscope pattern signal.
- 4) Adjust the Sub Brightness control VR (R1107) to achieve $500 mV \pm 15 mV$.
- 5) Set Brightness VR (R3009) and Contrast VR (R3011) controls to maximum then confirm that $1.5V \pm 0.1V$ is present between **TPD1** and **TPD2**.

14. PAL APC ADJUSTMENT

- 1) Set the following controls at the position indicated.
 Colour control VR (R3002) Maximum
 R651 (SECAM DL Adj.) Centre
- 2) Receive an PAL colour bar signal and set the Input signal selector SW. (S3003) to the PAL position.
- 3) Connect an oscilloscope between **TPA10** and chassis GND.
- 4) Adjust PAL APC ADJ. (R619) to achieve waveform shown in Fig. 28.

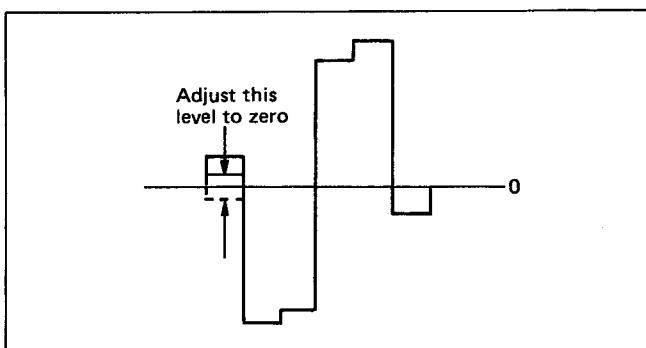


Fig. 28

15. PAL DELAY LINE ADJUSTMENT

- 1) Set the following control at the position indicated.
 Colour control VR (R3002) Maximum
- 2) Receive an PAL colour bar signal and set the Input signal selector SW. (S3003) to the PAL position.
- 3) Connect an oscilloscope between **TPA12** and chassis GND.

4) Adjust Delay Line Adj. VR (R633) and Delay Line Matching Trans. (L617) to achieve waveform shown in Fig. 29.

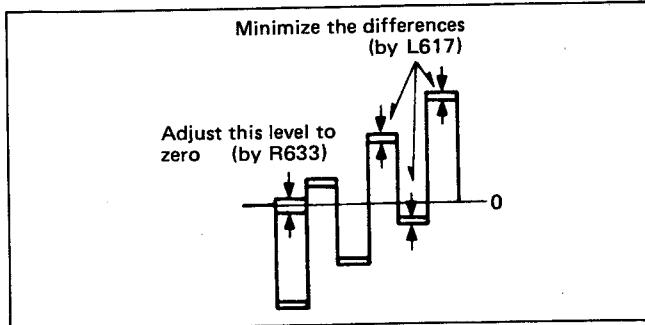


Fig. 29

16. PAL COLOUR OUTPUT ADJUSTMENT

- 1) Set the following control at the position indicated.
Colour control VR (R3002) Maximum
- 2) Receive an PAL colour bar signal and set the Input signal selector SW. (S3003) to the PAL position.
- 3) Connect an oscilloscope between TPA12 (B-Output) and chassis GND. When adjust Sub colour VR (R629) to achieve $1.8V \pm 0.1V_{p-p}$ on the oscilloscope as shown in Fig. 30
- 4) Connect an oscilloscope between TPA10 (R-Output) and chassis GND. When confirm that the waveform level is $2.2V \pm 0.5V_{p-p}$ on the oscilloscope.

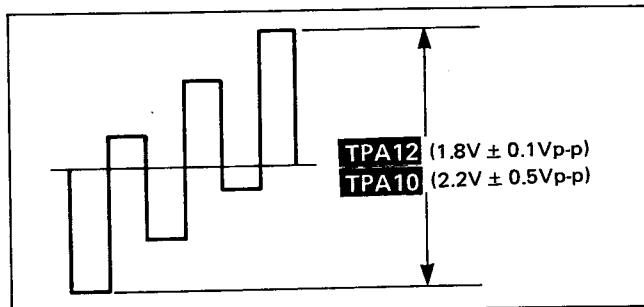


Fig. 30

17. NTSC APC ADJUSTMENT

Note: Before making this adjustment, PAL APC adjustment must be completed.

- 1) Set the following control at the position indicated.
Colour control VR (R3002) Maximum
Tint VR (R3006) Fully clockwise
- 2) Receive an PAL colour bar signal and set the Input signal selector SW. (S3003) to the PAL position.
- 3) Connect an electronic voltmeter to TPA6 and memorize indication of the electronic voltmeter.
- 4) Change signal PAL colour bar pattern into NTSC rainbow colour bar pattern and Input signal selector SW. (S3003) to the NTSC position.
- 5) Adjust C613 to obtain the value specified in item 4) within a tolerance $\pm 0.1V$.

18. 3.58 NTSC COLOUR OUTPUT

- 1) Set the following control at the position indicated.
Colour control (R3002) Maximum
- 2) Receive an NTSC rainbow colour bar signal and set the Input signal selector SW. (S3003) to the NTSC position.
- 3) Connect an oscilloscope between TPA12 (B-Output) and chassis GND. When confirm that the waveform level is $0.7V \pm 0.2V_{o-p}$ on the oscilloscope.
- 4) Disconnect oscilloscope from TPA12 (B-Output) and connect oscilloscope to TPA10 (R-Output).
When confirm that the waveform level is $0.6V \pm 0.2V_{o-p}$ on the oscilloscope.
- 5) Disconnect oscilloscope from TPA10 (R-Output) and connect oscilloscope to TPA12 (B-Output).
- 6) Turn Tint control (R3006) and confirm that the variable range is more than 60° .

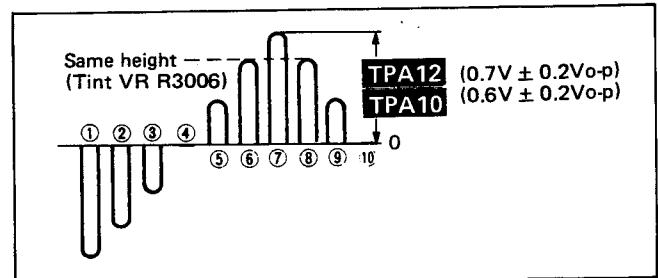


Fig. 31

19. M-NTSC COLOUR OUTPUT

Note: Before making this adjustment, PAL APC adjustment must be completed.

- 1) Set the following control at the position indicated.
Colour control (R3002) Maximum
- 2) Receive an M-NTSC rainbow colour bar signal and set the Input signal selector SW. (S3003) to the M-NTSC position.
- 3) Connect an oscilloscope between TPA12 (B-Output) and chassis GND. When confirm that the waveform level is $0.6V \pm 0.2V_{o-p}$ on the oscilloscope.
- 4) Disconnect oscilloscope from TPA12 (B-Output) and connect oscilloscope to TPA10 (R-Output).
When confirm that the waveform level is $0.5V \pm 0.2V_{o-p}$ on the oscilloscope.
- 5) Disconnect oscilloscope from TPA10 (R-Output) and connect oscilloscope to TPA12 (B-Output).
- 6) Turn Tint control (R3006) and confirm that the variable range is more than 60° .

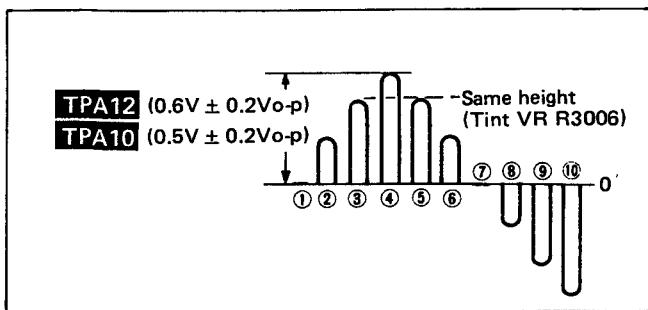


Fig. 32

20. SECAM DELAY LINE ADJUSTMENT

- Set the following control at the position indicated.

Colour control (R3002) Maximum
Adjust R-Y Gain (R646) and B-Y Gain (R659) controls shown in Fig. 33.

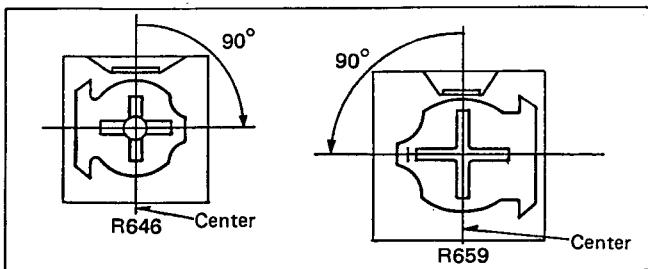


Fig. 33

- Receive an SECAM colour bar signal and set the Input signal selector SW. (S3003) to the SECAM position.
- Connect an oscilloscope between **TPA12** (B-Output) and chassis GND.
- Adjust Delay Line Adj. (R651) and Delay Line Matching Trans. (L619) to achieve waveform shown in Fig. 34.

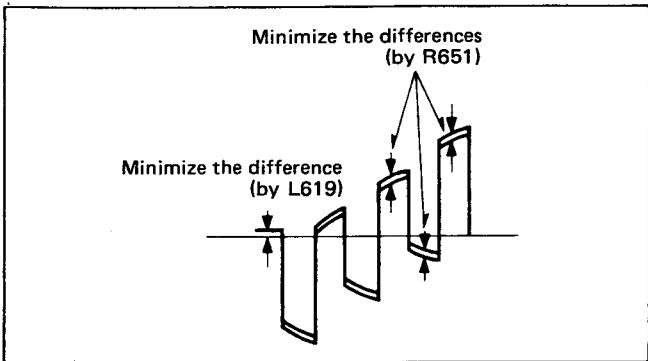


Fig. 34

21. BELL FILTER/LINE DISCRIMINATOR

- Set the following control at the position indicated.
Colour control (R3002) Maximum
- Receive an SECAM colour bar signal and set the Input signal selector SW. (S3003) to the SECAM position.
- Connect an oscilloscope between **TPA12** (B-Output) and chassis GND.
- Adjust L615 to achieve waveform shown in Fig. 35.

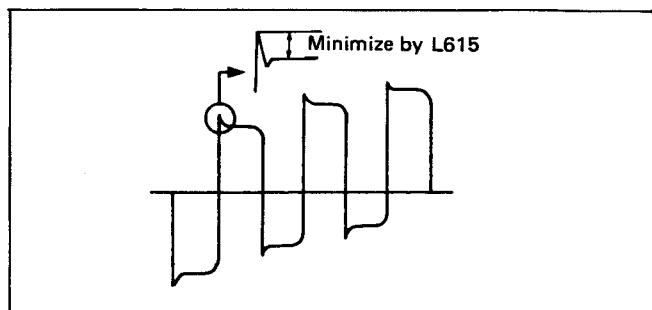


Fig. 35

22. SECAM COLOUR OUTPUT ADJUSTMENT

- Set the following control at the position indicated.

Colour control (R3002) Maximum

- Receive an SECAM colour bar signal.

3) Adjust R-Y Gain (R646) and B-Y (R659) controls shown in Fig. 36.

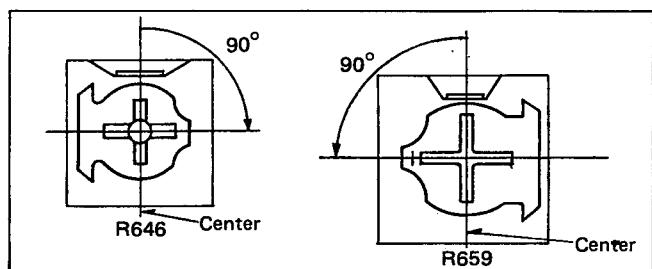


Fig. 36

- Connect an oscilloscope between **TPA12** (B-Output) and chassis GND.
- Adjust R659 and L619 to achieve waveform shown in Fig. 37.

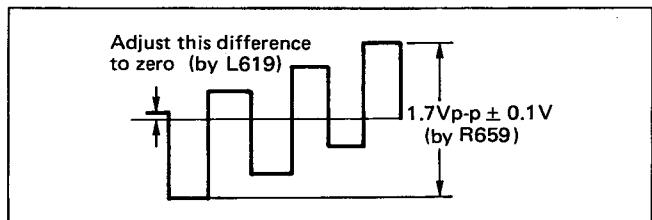


Fig. 37

- Disconnect oscilloscope between **TPA12** (B-Output) and connect oscilloscope to **TPA10** (R-Output).
- Adjust R646 and L611 to achieve waveform shown in Fig. 38.

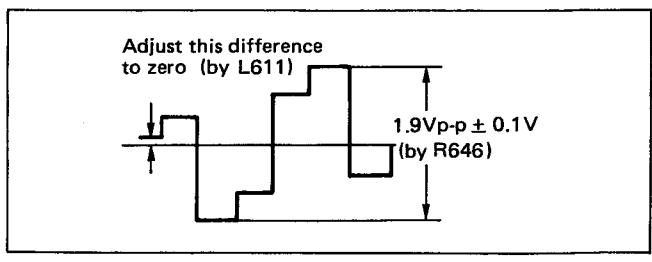


Fig. 38

INSTALLATION/ADJUSTMENT PROCEDURE

The PT-102N is preset for a 3048 mm (120 inch) screen-FRONT CEILING mode.

Confirm diagonal screen size 1270 ~ 3048 mm (50 ~ 120 inches) and projection mode (6 modes), and choose the proper procedure (A ~ D) from Table 2.

Follow the appropriate procedure (Table 3, A ~ D) to install and adjust the projector properly.

| Model | PT-102N/GN/AN/SN | | |
|--------------------------|----------------------------------|----------------------------------|-----------------------------------|
| Screen Size Mode | 1270 ~ 1372 mm (50 ~ 54 inch) | 1397 ~ 2134 mm (55 ~ 84 inch) | 2159 ~ 3048 mm (85 ~ 120 inch) |
| Front Ceiling | (B) | (B) | (D) |
| Front Floor | (A) | (A) | (C) |
| Rear Ceiling | (A) | (A) | (C) |
| Rear Floor | (A) | (A) | (C) |
| Rear Ceiling with Mirror | (B) | (B) | (D) |
| Rear Floor with Mirror | (A) | (A) | (C) |

[Table 2] Screen Size and Projection Mode

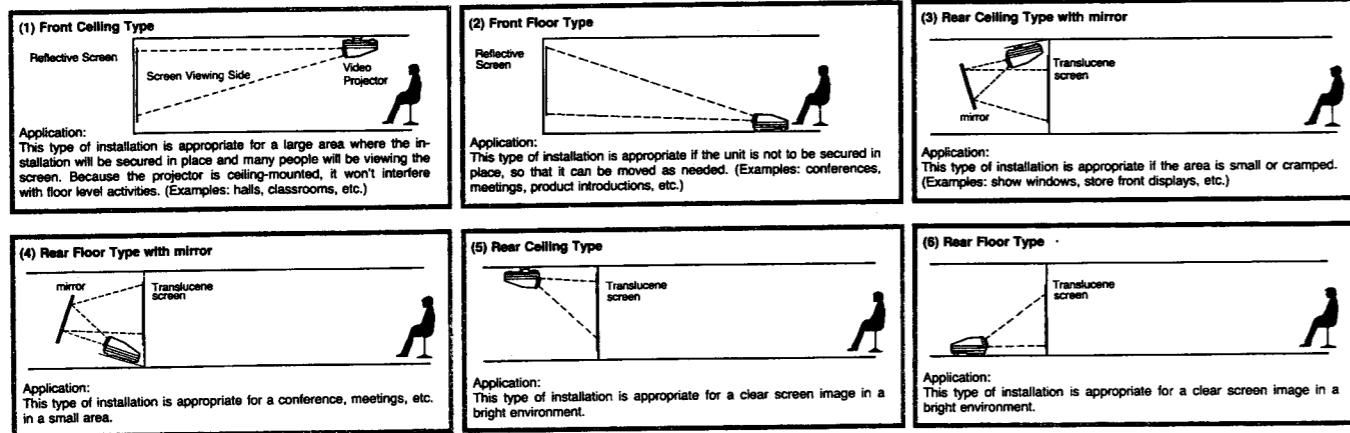
| No. | PROCEDURE | (A) | (B) | (C) | (D) |
|-----|-------------------------------------|-----|-----|-----|-----|
| 1 | Variations on Standard installation | YES | YES | YES | YES |
| 2 | Installation | YES | YES | YES | YES |
| 3 | Projection Size Adjustment | YES | YES | NO | NO |
| 4 | Preparation for Adjustment | YES | YES | YES | YES |
| 5 | Lens Focus Adjustment | YES | YES | YES | YES |
| 6 | Verification of Image Position | YES | YES | YES | YES |
| 7 | Deflection Adjustment | YES | NO | YES | NO |
| 8 | Green Raster Adjustment | YES | ◆ | YES | ◆ |
| 9 | Static Convergence Adjustment | YES | YES | YES | YES |
| 10 | Dynamic Convergence Adjustment | YES | YES | YES | ◆ |
| 11 | Shading Correction | ◆ | ◆ | ◆ | ◆ |
| 12 | R.G.B. Mode Adjustment | ◆ | ◆ | ◆ | ◆ |

◆ If necessary

[Table 3] Installation Procedure and Necessary Adjustment

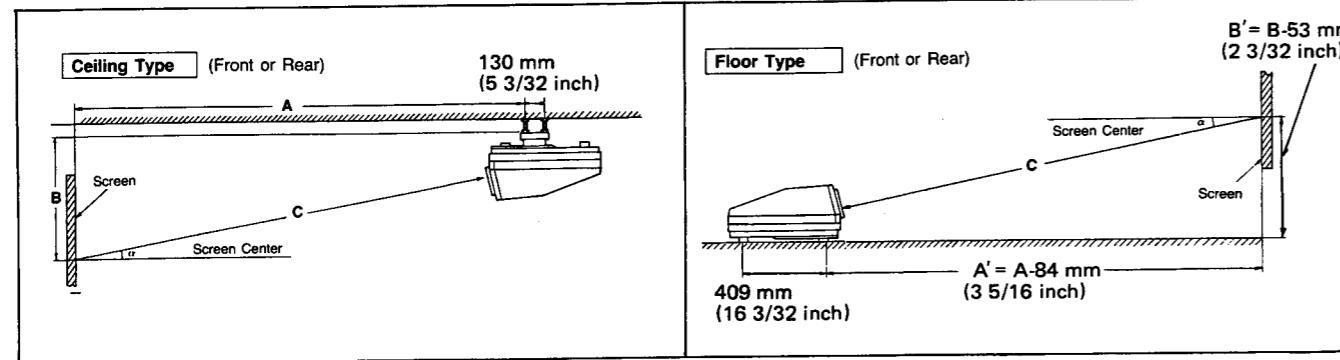
1. Variations on Standard Installation

There are two fundamental installation methods: floor placement and ceiling mount, and it is easy to change to the desired method. The method should be selected according to the location of the installation and other circumstances, such as using a mirror for indirect projection in cramped locations, or projection from behind the screen, etc.



2. Installation

2-1. Front Ceiling, Front Floor, Rear Ceiling and Rear Floor.

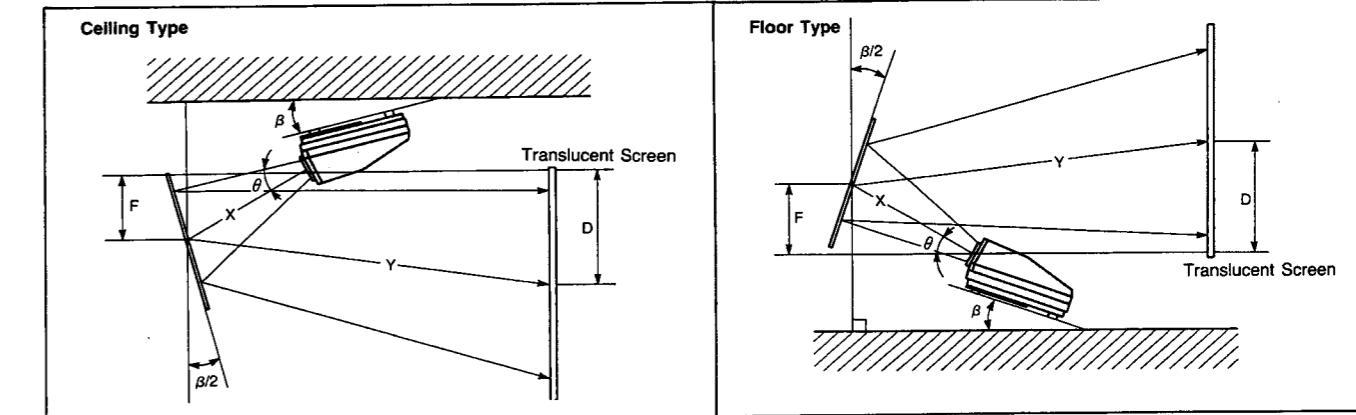


[Table 4] Relationship between screen size and mounting distance.

| SCREEN SIZE (Z) | WIDTH (X) | HEIGHT (Y) | A | B | C | α |
|-----------------|-----------------|-----------------|------------------|----------------|------------------|----------|
| 3048 (120) | 2438 (96) | 1829 (72) | 3683 (145) | 1125 (44 5/16) | 3635 (143 3/32) | 13.79° |
| 2540 (100) | 2032 (80) | 1524 (60) | 3104 (122 3/16) | 982 (38 11/16) | 3037 (119 19/32) | 13.79° |
| 2286 (90) | 1829 (72) | 1372 (54) | 2814 (110 13/16) | 912 (35 29/32) | 2741 (107 29/32) | 13.79° |
| ◆ 2134 (84) | 1707 (67 3/16) | 1280 (50 13/32) | 2609 (102 11/16) | 848 (33 13/32) | 2527 (99 1/2) | 13.6° |
| ◆ 1829 (72) | 1463 (57 19/32) | 1097 (43 3/16) | 2304 (90 11/16) | 778 (30 19/32) | 2210 (87) | 13.6° |
| ◆ 1524 (60) | 1219 (48) | 914 (36) | 2066 (81 11/32) | 716 (28 3/16) | 1962 (77 1/4) | 13.6° |
| ◆ 1270 (50) | 1012 (40) | 762 (30) | 1774 (69 27/32) | 640 (25 3/16) | 1670 (65 3/4) | 13.4° |

Note: Measurement in mm and (inch).

2-2. Rear Ceiling or Rear Floor with Mirror



$$X + Y = C$$

C = Distance from screen center to lens surface.
(Throw Distance)

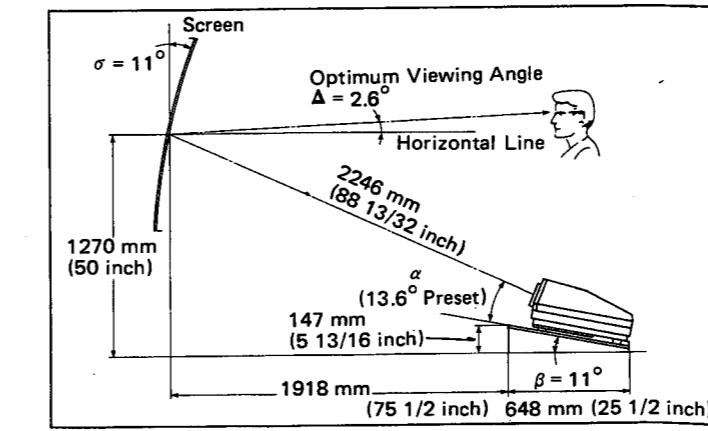
$$F = X \cdot \sin(\theta + \beta)$$

$$D = Y \cdot \sin \theta + F$$

[Example]

| Screen Size | θ |
|-------------|----------|
| 1270 (50) | 11.33° |
| 1778 (70) | 12.42° |
| 2540 (100) | 13.1° |
| 3048 (120) | 13.4° |

3 Semi Curved Screen (ET-721S)



To provide maximum brightness, the projector and screen tilt angle should be properly set for optimum viewing angle.
Screen tilt angle should be nearly same as projector tilt angle ($\pm 5^\circ$).

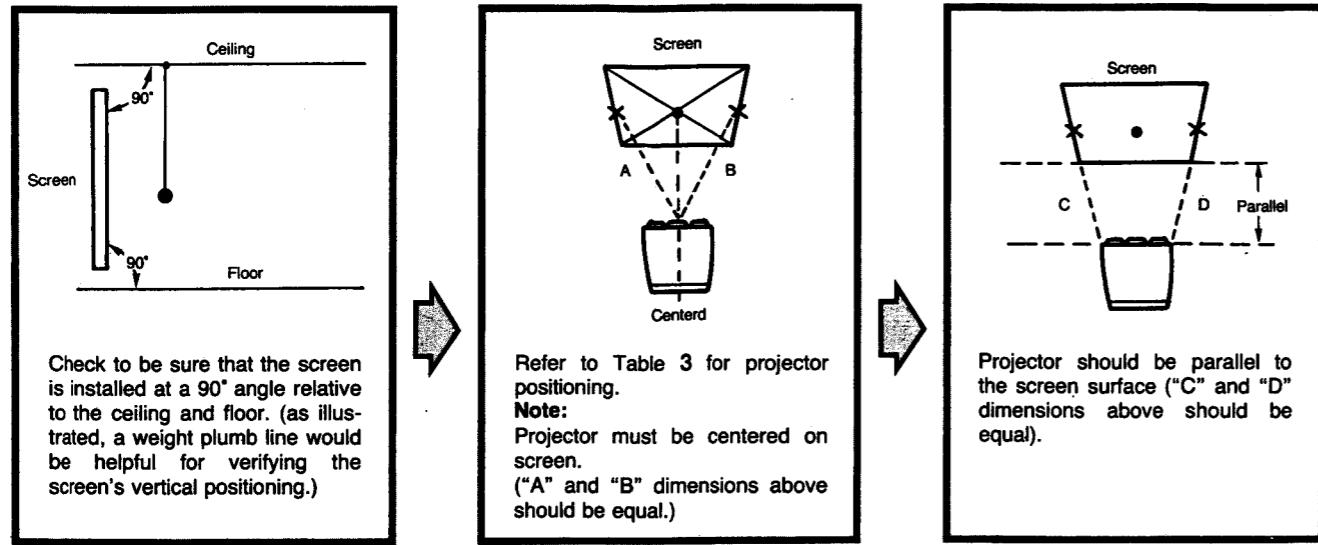
$$\text{Optimum Viewing Angle: } \Delta = \alpha + \beta - 2\sigma$$

α : Preset Projection Angle (13.6°)

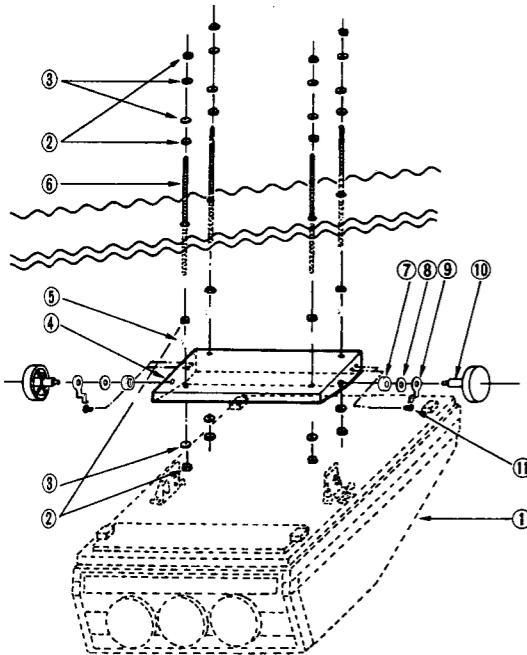
β : Projector Tilt Angle

σ : Screen Tilt Angle

2-3. Projector Positioning



2-4. Installation Kit (Ceiling Mount)



| No. | Part Name | Part No. | Pcs. |
|-----|------------------------|-----------|------|
| ① | Main Unit | — | — |
| ② | M10-Nut | XNG10B | 16 |
| ③ | M10 Washer | XWH10 | 12 |
| ④ | Holding Plate | TKR23410 | 1 |
| ⑤ | M10 Spring Washer | XWB10B | 4 |
| ⑥ | M10 Holding Bolt | THE600 | 4 |
| ⑦ | Ceiling Washer | TKR23520 | 2 |
| ⑧ | Washer | THW70023W | 2 |
| ⑨ | Ceiling Stopper Washer | THW70024 | 2 |
| ⑩ | Ceiling Bolt | THE758 | 2 |
| ⑪ | Tilt Securing Screw | XYN5+E12S | 2 |

2-5. Holding Plate Installation

1. Position of Holding Plate

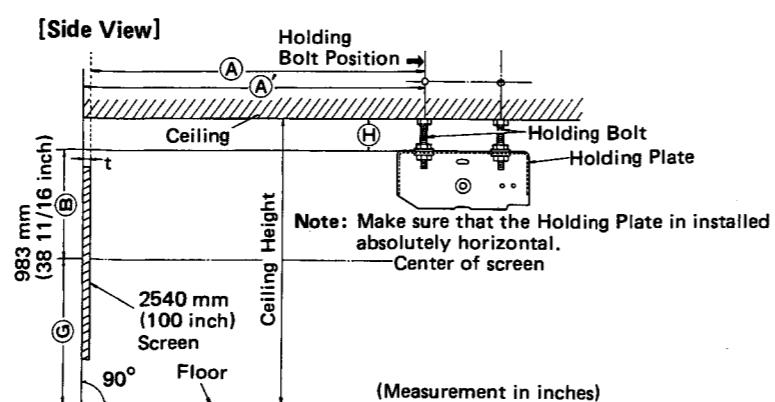
(1) Decide the distance \textcircled{A}' between the front holding bolts and the wall which will hold the screen.

$$\textcircled{A}' = 3104 \text{ mm (122 3/16 inch)} + t \text{ mm}$$

(t: distance between wall and front surface of screen.)

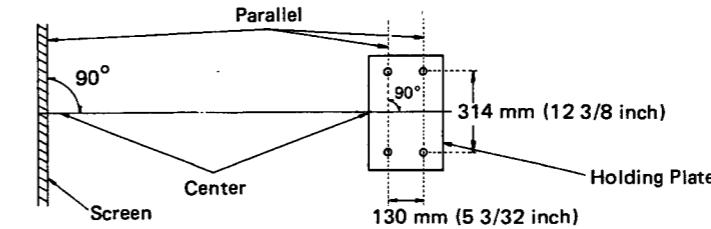
(2) Calculate the distance \textcircled{H} between the ceiling and the Holding Plate.

$$\textcircled{H} = \text{ceiling height} - \textcircled{G} - \textcircled{B} = 983 \text{ mm (38 11/16 inch)}$$



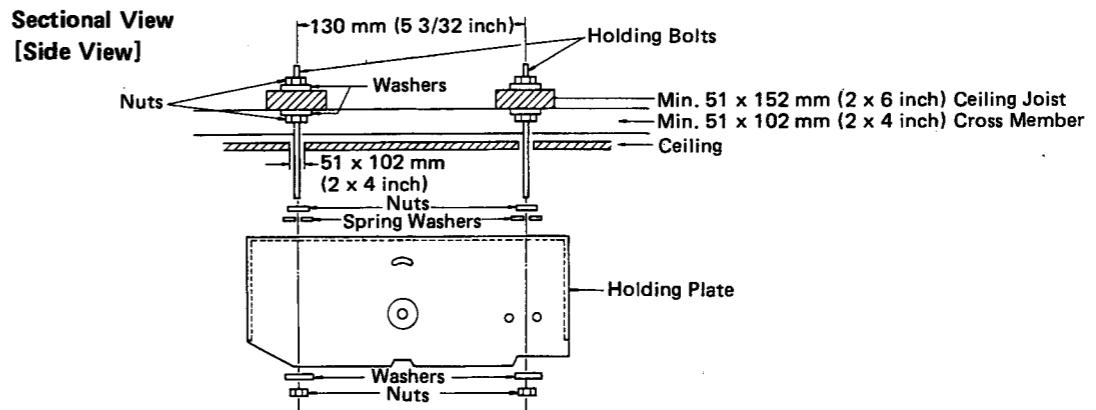
(3) Be careful when positioning the 4 bolts. The holding bolts should be parallel to the screen. Also, the center of the screen should match the center of the holding plate as shown in the figure below.

[Top View]

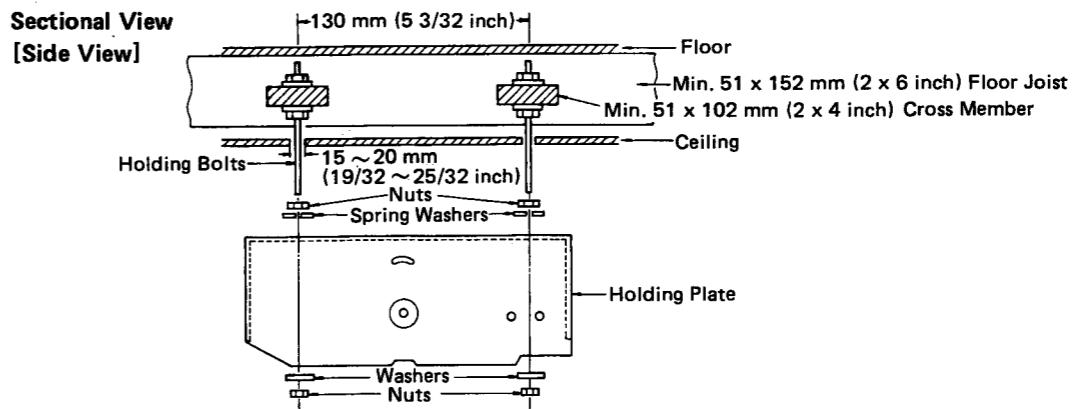


2. Examples of installation in typical wood frame structures

(1) For installation in single-story structure or on the uppermost floor.



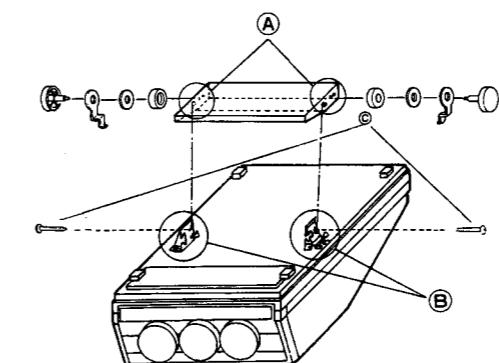
(2) For installation in ceiling other than on the uppermost floor.



3. Main Unit Installation

(1) Raise the PT-102N/GN/AN/SN and hook latch \textcircled{B} to the Pivot \textcircled{A} on the Holding Plate.

(2) Set the tilt angle and secure the unit with screw \textcircled{C} .



3. Projection Size Adjustment

WHEN CHANGING THE SCREEN SIZE, FOLLOW THE STEPS AS SHOWN BELOW.

- (1) Remove the three screws designated "※ 1" on Fig. 39 and remove the UPPER CABINET.
- Remove the two screws designated "※ 2" on cabinet sides.
- Remove the two screws designated "※ 3" and remove the LENS PANEL.

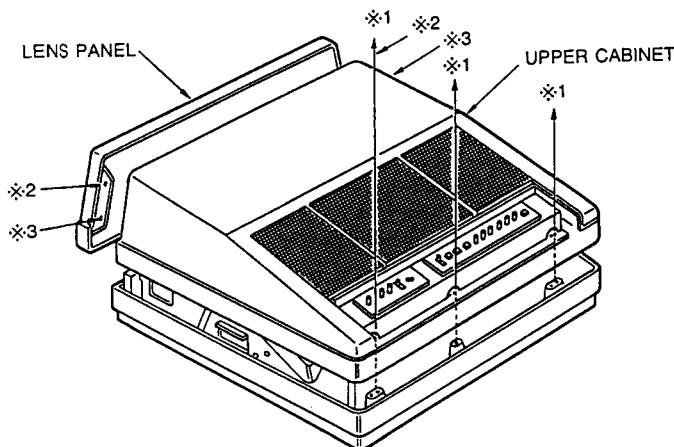


Fig. 39

- (2) Remove the twelve LENS mounting screws (4 per LENS) and remove LENSES and SPACERS.

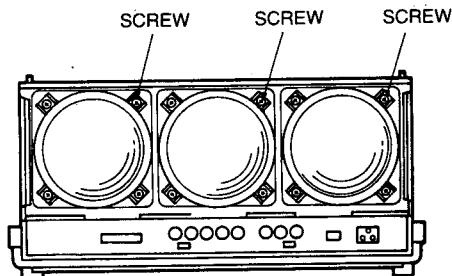


Fig. 40

- (3) Place the unit on its side as illustrated Fig. 41. And loosen the four screws designated "※ 4" two or three turns. (Do not remove these screws.)

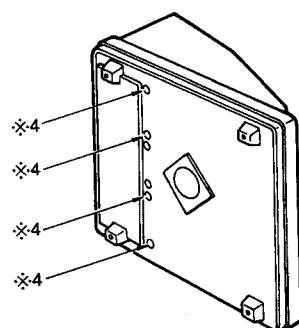


Fig. 41

- (4) Return the unit to its Original position, and remove the four screws designated '※ 5'. [Fig. 42]

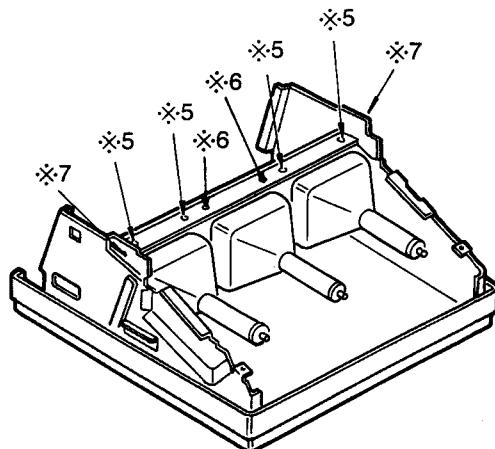


Fig. 42

- (5) Adjust the position of the Red and Blue CRTs for the desired projection size as shown in Table 5 and Fig. 43.

| Display Value | Corresponding Size |
|---------------|--------------------------------|
| 50 | 1270 ~ 1372 mm (50 ~ 54 inch) |
| 70 | 1397 ~ 2134 mm (55 ~ 84 inch) |
| 100 | 2159 ~ 3048 mm (85 ~ 120 inch) |

Table 5

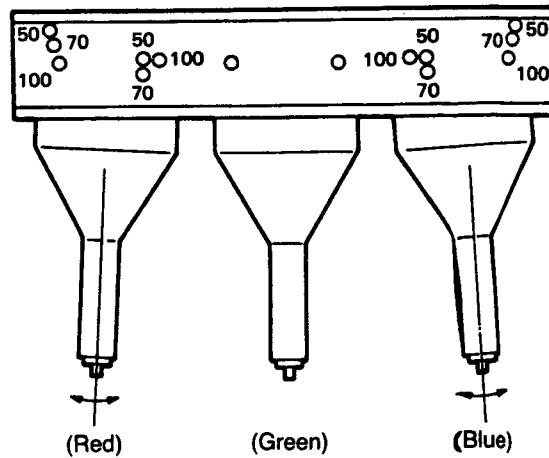


Fig. 43

Note:

If you have difficulty adjusting the CRTs, loosen screws "※ 6" and "※ 7" [Fig. 42] slightly. Be sure to re-tighten after adjustment.

After insuring the proper CRT positions tighten the four "※ 5" screws [Fig. 42].

Place the unit on its side, and tighten the four "※ 4" screws. [As in Fig. 41]

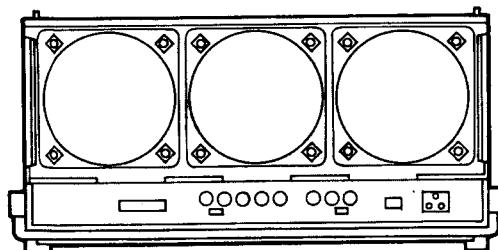
(6) Install the three LENS SPACERS corresponding to the projection size selected in Table 5 and step (5).

(Example)
Display Value

LENS SPACER Set

| | |
|-----|----------------|
| 50 | 50R/50G/50B |
| 70 | 70R/70G/70B |
| 100 | 100R/100G/100B |

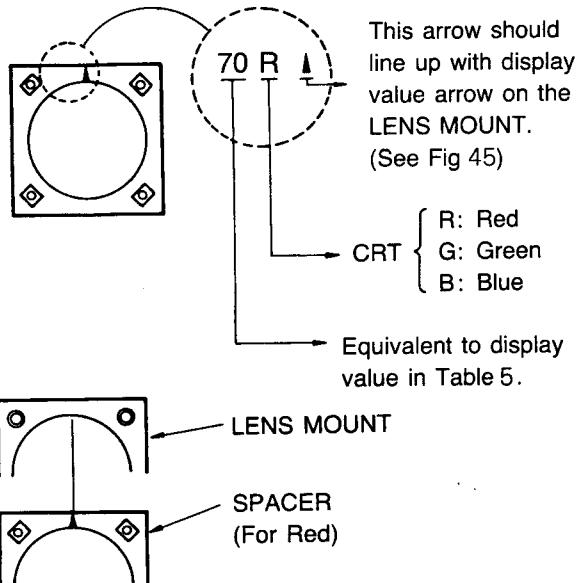
Mount the SPACER as shown in Fig. 44.



[Fig. 44]

(SPACERS are keyed to prevent improper installation.)

Refer to the diagram that follows, for proper SPACER positioning.



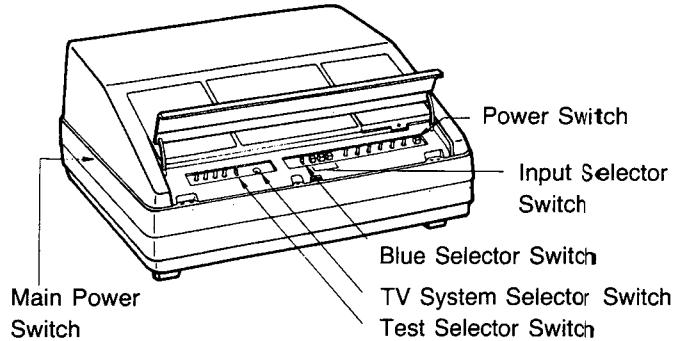
[Fig. 45]

(7) After mounting the SPACERS, re-install the three LENS units, (4 screws each) [Fig. 40]
 (8) Refit the LENS PANEL and tighten its four screws “*2” and “*3” [Fig. 39]
 (9) After ensuring that a proper picture is displayed, replace the UPPER CABINET and tighten the three screws “*1” [Fig. 39]

4. Preparation For Adjustment

If the signal input to the Projector is a VIDEO signal, set the signal selector switch to VIDEO; if they are LINE signals, set the switch to LINE; and if they are RGB signals, set the switch to RGB.

- * If the REMOTE CONTROLLER is connected, use it to set the signal selector switch (RGB/VIDEO/LINE), and to adjust the **Color**, the **Tint**, the **Brightness**, the **Contrast** and the **Sharpness**.



5. Lens Focus Adjustment

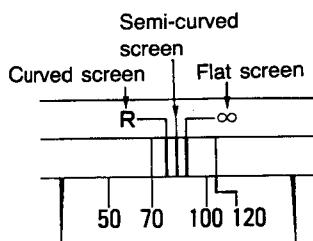
This operation should only be carried out if there is any difficulty focusing the image. If the focus is adjusted, the convergence will be disturbed and will have to be re-adjusted.

- This unit incorporates a double focus lens newly developed by Panasonic. Therefore, a pair of lenses are available for 1270 to 3048 mm (50 ~ 120 inch) projection, and peripheral focus adjustment has also become easier. Adjust the focus in the following manner.

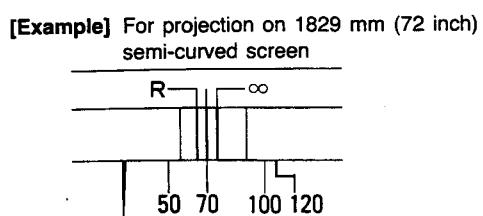
NOTE: Among the three lenses, a red lens and a green lens are common to each other, but since a blue one is different in spectrum, it has no interchangeability with a red and green lens.

METHOD OF ADJUSTING FOCUS

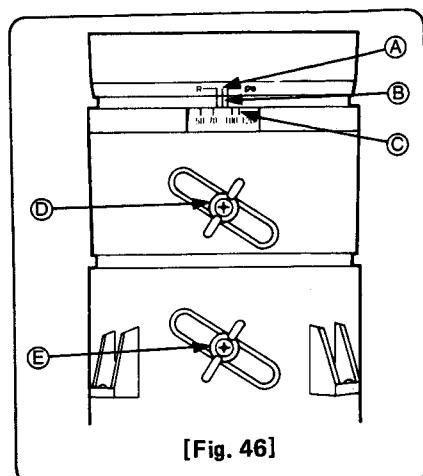
- 1) Select one of the RED, GREEN, or BLUE projection CRTs for adjustment.
(The other two CRTs should be fitted with lens covers.)
- 2) Loosen the wing-nut **D**. (Refer to Fig. 46)
- 3) Turn and adjust the lens so that the indications on **A** and **C** coincide with each other according to the type and size of screen used. **A** shows the type of screen, and **C** shows the screen size. (Refer to Fig. 47)



[Fig. 47]



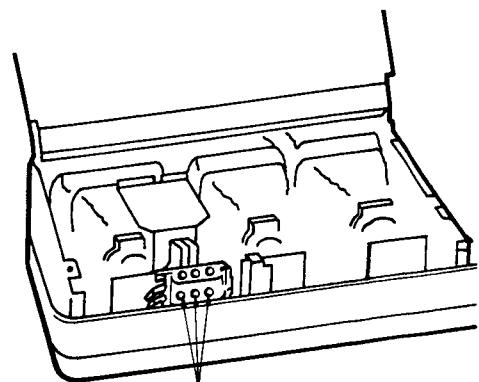
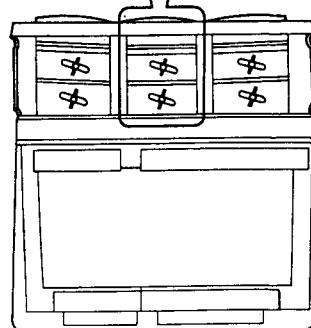
[Fig. 48]



[Fig. 46]

Note: At this time, among the three indent (B scale) between **A** and **C**, the indent in the center should be adjusted so that **A** and **C** are connected.

- 4) Fully tighten and secure adjust the wing-nut **D**.
- 5) Rotate the lens of the out-of-focus projection CRT after releasing the wing-nut **E** used to fix the projection lens. Adjust the lens to the point at which the scanning lines can be most clearly seen.
- 6) Tighten the wing-nut **E** of the projection lens. Then, adjust the two remaining lenses in the same procedure.



focus control

[Fig. 49]

6. Verification of Image Position

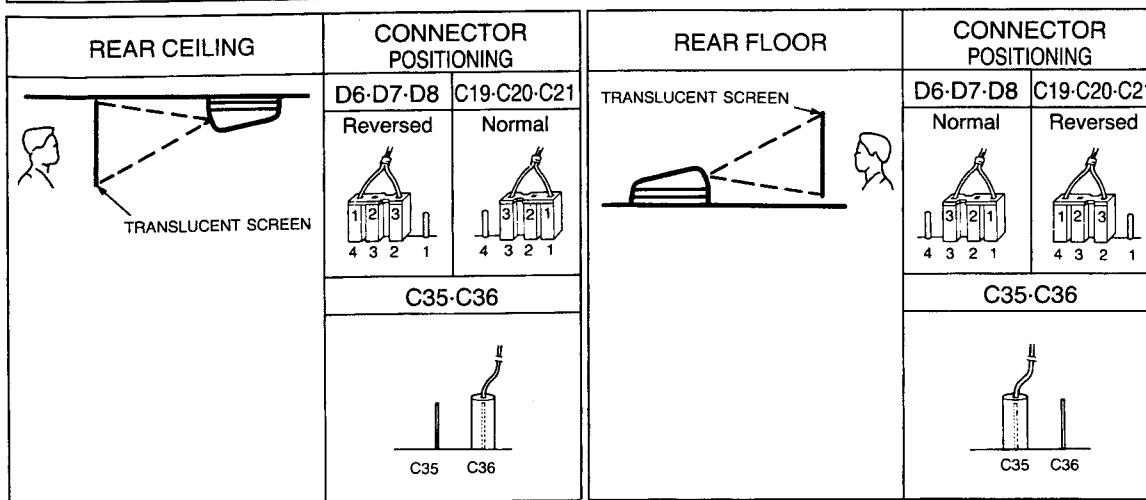
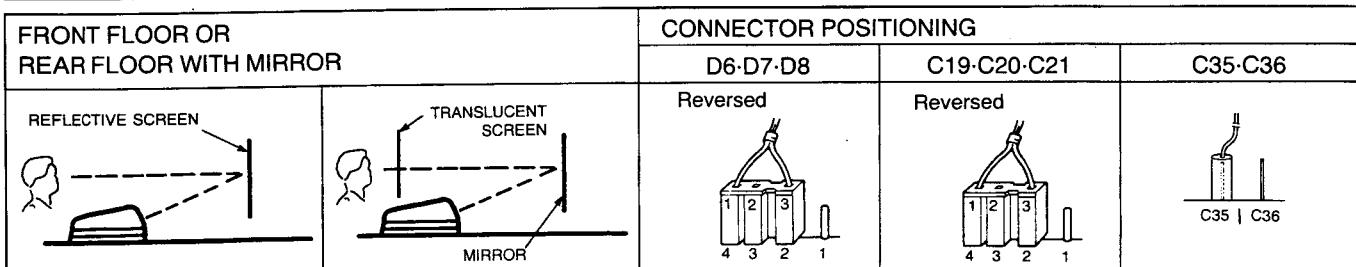
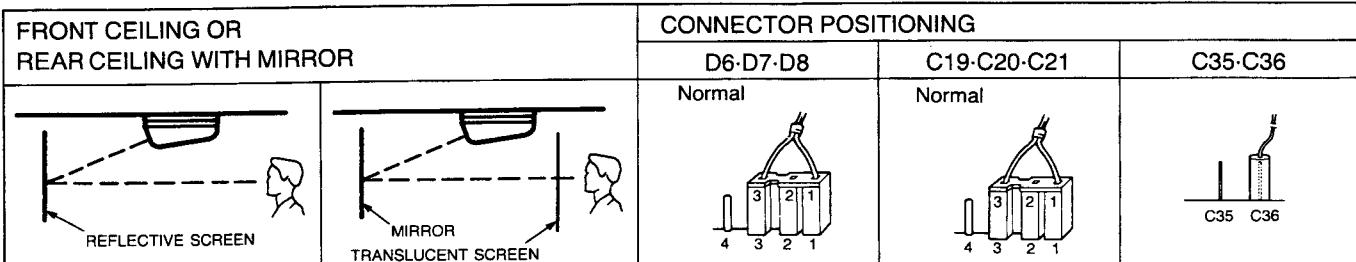
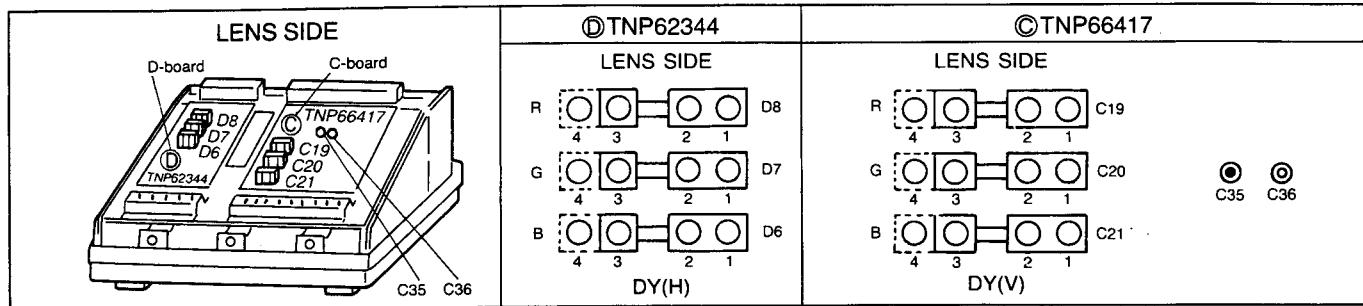
Turn ON the unit and any other equipment connected to it, and project an image on the screen. Check that the projected image matches the screen position. If the projected image is either too high or low, or to the right or left of the screen, or if the image is bigger at top or bottom or left or right, there is probably an error in the way the equipment was installed and all dimensions should be carefully rechecked.

7. Deflection Change

1. Turn off the Main Power Switch.
2. Changing the deflection circuit by repositioning the connectors on the D (TNP62344) and C (TNP66417) P.C. Boards allows the PT-102N/GN/AN/SN to be configured for the various projection modes.

WARNING:

The connectors; D6, D7, D8, C19, C20 and C21 are designed to fit easily onto the connectors pins on the P.C. Boards. They must be reversed (180°) when changing the deflection connections. The unit will not function properly if the connectors are improperly inserted.



8. Green Raster Adjustment

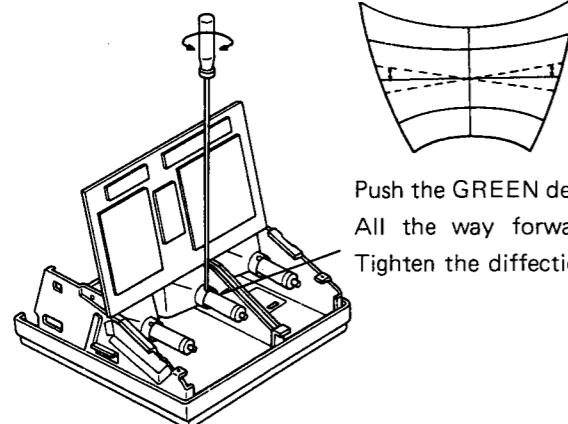
Note; Adjustment of the GREEN RASTER may not be necessary for FRONT CEILING or REAR CEILING modes.
Any controls not mentioned in this manual require the use of precision equipment for adjustment. Any attempt to adjust these controls may prevent satisfactory convergence and raster adjustments.
Carry out the installation adjustments in the order in which they are presented in this manual. Failure to do so many result in it being impossible to carry out satisfactory adjustment.

1. Turn the TEST switch ON and display the TEST (cross-hatch) Pattern.

2. Place Lens covers over the RED and BLUE lenses.

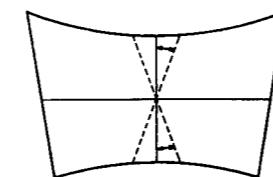
3. Horizontal Skew Adjustment

Loosen the GREEN deflection yoke clamp screw and rotate the deflection yoke so that the Horizontal Center Line is horizontal.



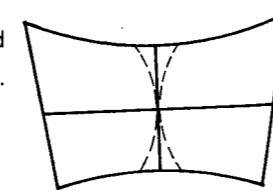
4. Vertical Skew Adjustment

Adjust the Vertical Skew control (R7011) to obtain a Vertical Center Line.



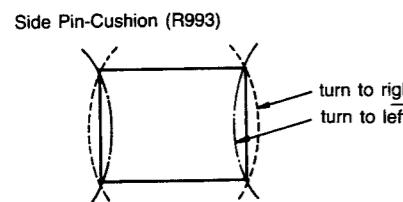
5. Vertical Bow Adjustment

Adjust the Vertical Bow adjustment (R944) so that the Vertical Center Line is straight.



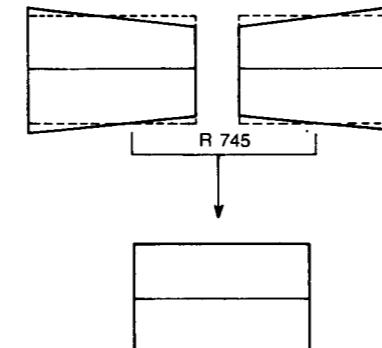
6. Side Pincushion Adjustment

Adjust the Side Pincushion control (R993) so that both of the Side Vertical Lines are straight.



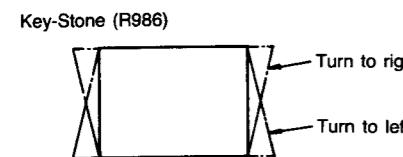
9. Top and Bottom Keystone Adjustment

Adjust the Top and Bottom Keystone control (R745) so that the Top and Bottom Lines are parallel.



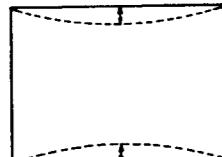
7. Side Keystone Adjustment

Adjust the Side Keystone control (R986) so that both of the Side Vertical Lines are parallel.



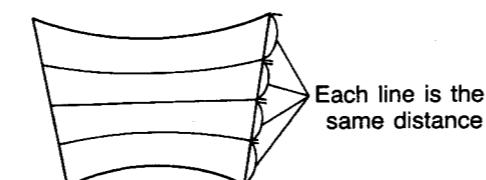
8. Top and Bottom Pincushion Adjustment

Adjust the Top and Bottom Pincushion control (R788) so that the Top and Bottom Lines are Straight.



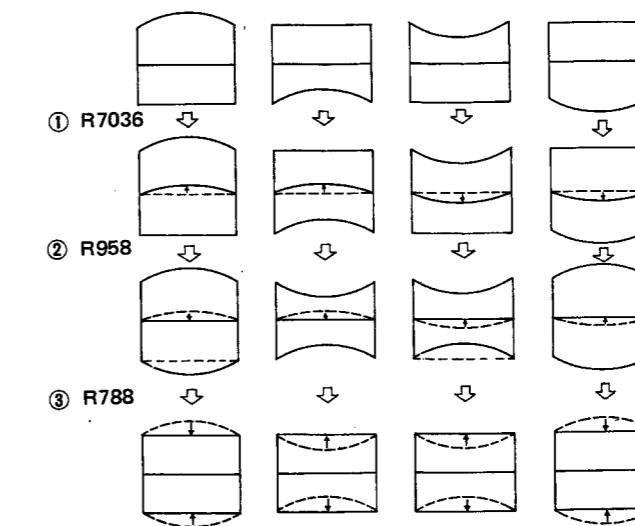
10. Vertical Linearity Adjustment

Adjust the Vertical Linearity control (R442) to produce the display shown in Figure.



11. Top and Bottom Symmetry Adjustment

When the Top and Bottom of the display are not Symmetrical, as shown below adjust the controls (R788, R7036 and R985).



12. Vertical Size Adjustment

Input a PAL or SECAM signal to the VIDEO or LINE input. Set the INPUT SELECTOR Switch to the appropriate position.

Adjust the PAL/SECAM Vertical Size control (R428) for the appropriate picture height.

Input an NTSC signal and set the INPUT SELECTOR switch to NTSC, Adjust the NTSC Vertical Height control (R432) for the appropriate picture height.

Note; It is not necessary to adjust the PAL/SECAM Vertical Size control (R428) if the projector will not be used for PAL or SECAM Signals.

13. Horizontal Size Adjustment

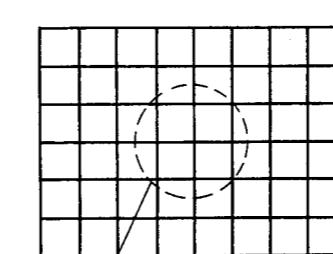
Adjust the Horizontal Size control (R1541) on the D board for the proper picture width.

14. Horizontal/Vertical Position Adjustment

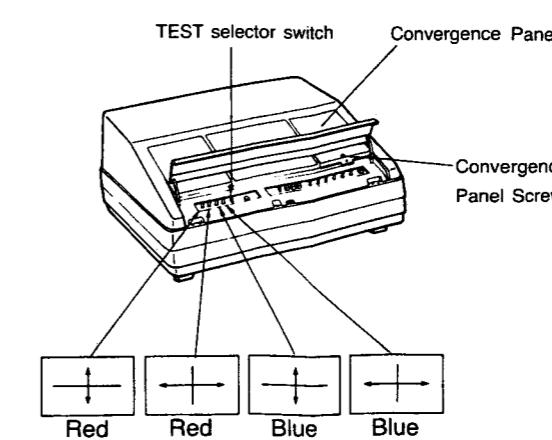
By using the Green Static Convergence controls (R7005 and R7006), Horizontal and Vertical Positioning can be adjusted. These controls are for adjustments at the factory and set the Green Raster as the reference for convergence adjustments. Do not attempt to compensate for installation errors by using these controls.

9. Static Convergence Adjustment

1. Turn the TEST selector switch ON and output the CROSS-HATCH PATTERN to check the degree of colour divergence. If there is any divergence, adjust the central convergence controls (R-V, R-H, B-V, B-H).



Make adjustments in regard to this portion.

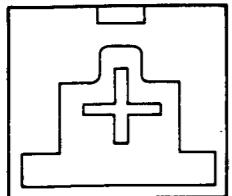


Opening the Convergence Panel.
Open the operation panel cover and remove the convergence panel screw. While holding the operation panel cover half closed, slide the convergence panel to the middle of the operation panel cover to remove it.

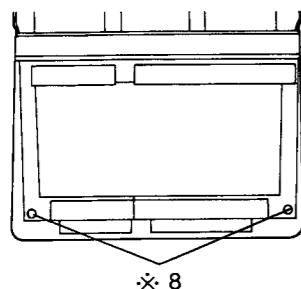
10. Dynamic Convergence Adjustment

Note: If the Deflection Polarity was not changed (page 28), Dynamic Convergence Adjustment procedures 1. through 6. will not be necessary.

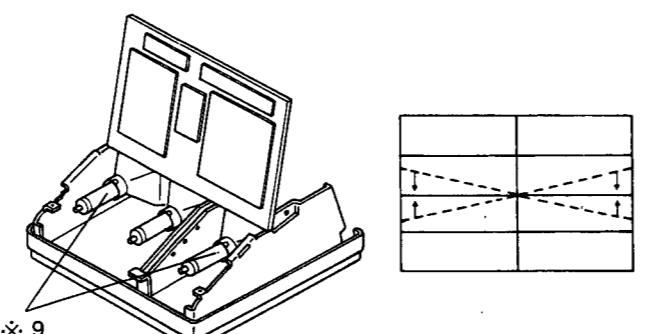
- Turn off the main power switch.
- Remove the three screws designated ***1** as in [Fig. 39] and remove the upper cabinet.
- Set all of the Red and Blue convergence controls (**⑤** ~ **⑯**) to the center as in Figure below.



- Loosen 2 screws ***8** counterclockwise by 90° as in Figure and lift the chassis.



- Turn on the main power switch. Input an external signal and turn the TEST switch on.
- Loosen the Red and Blue deflection yoke clamp screws ***9** and rotate the Red and Blue deflection yokes, so that the Red and Blue horizontal center line will be parallel with Green horizontal center line.



Push the Red and Blue deflection yokes all the way forward on the CRTs and tighten the deflection yoke clamp screw of each.

- Cover the Blue lens with the lens cover.
- Adjust each of the Red convergence controls in order from **⑤** to **⑯** as in Fig. 50 so that the Red pattern matches the Green pattern.
- Cover the Red lens with the Lens cover and perform the operation in 8. for the Blue CRT. Adjust the Blue controls in order from **(⑯)** to **(⑮)**.

[Fig.50]

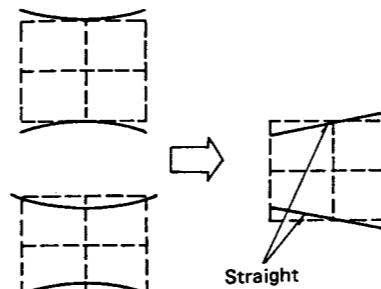
| Order of Adjustment VR'S | | | | | Function of Adjustment VR'S | | | | |
|--------------------------|----------|----------|----------|----------|-----------------------------|-------|------|-------|------|
| G | B-H | B-V | R-H | R-V | G | B-H | B-V | R-H | R-V |
| MAIN | | | | | R788 | R928 | R807 | R892 | R870 |
| ① | ② | ③ | ④ | ⑤ | R7011 | R930 | R808 | R894 | R871 |
| ⑥ | ⑦ | ⑧ | ⑨ | ⑩ | R944 | R932 | R911 | R896 | R873 |
| ⑪ | ⑫ | ⑬ | ⑭ | ⑮ | R745 | R935 | R813 | R898 | R876 |
| ⑯ | ⑰ | ⑱ | ⑲ | ⑳ | R937 | R915 | R900 | R890 | R878 |
| SUB1 | | | | | SUB1 | | | | |
| ② | ③ | ④ | ⑤ | ⑥ | R839 | R917 | R901 | R890 | |
| ⑦ | ⑧ | ⑨ | ⑩ | ⑪ | R941 | R919 | R904 | R892 | |
| ⑫ | ⑬ | ⑭ | ⑮ | ⑯ | R943 | R921 | R906 | R894 | |
| ⑰ | ⑱ | ⑲ | ⑳ | ㉑ | R926 | R923 | R890 | R885 | |
| G-STATIC | | | | | SUB2 | | | | |
| ㉒ | ㉓ | ㉔ | ㉕ | ㉖ | R7006 | R7005 | R924 | R7013 | R887 |
| ㉗ | ㉘ | ㉙ | ㉚ | ㉛ | R7012 | | | | |

Main Adjustment **⑤** to **⑯** for RED - (**㉖** to **㉛** for BLUE)

- 31 -

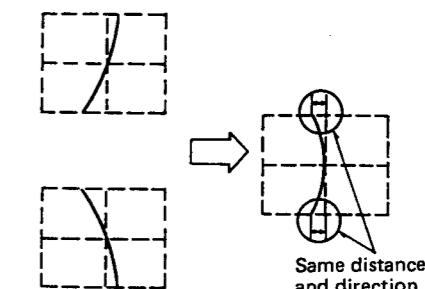
⑤(㉖) Top and bottom pincushion

Rotate R870 (R907) so that both top and bottom horizontal lines are straight.



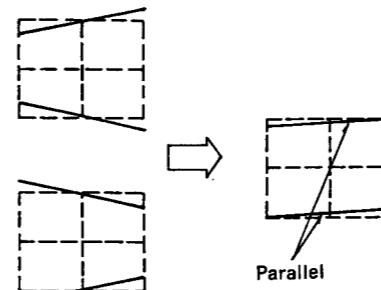
⑨ (㉟) Vertical Skew

Rotate R894 (R930) so that the vertical center line is touching at the center and equal distances at each end from green vertical center line.



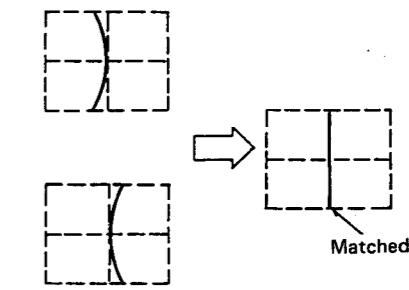
⑥ (㉗) Top and bottom key stone

Rotate R892 (R928) so that Top and bottom lines are parallel.



⑩ (㉙) Vertical Bow

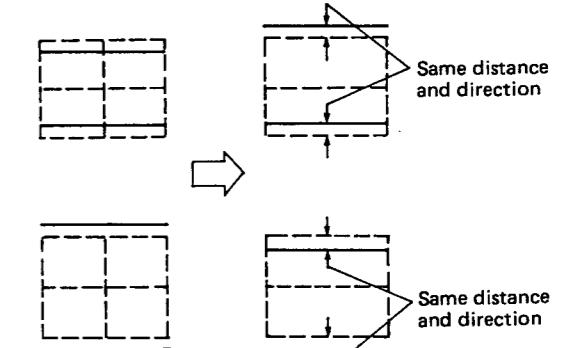
Rotate R896 (R932) so that the vertical center line matches the green vertical center line.



If you can not converge, readjust ⑨ (㉟) (Vertical Skew)

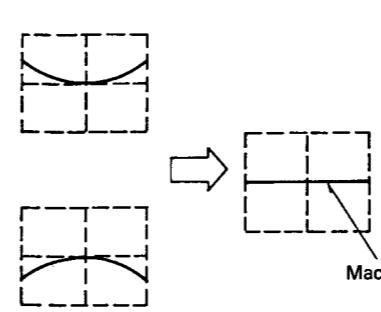
⑪ (㉜) Vertical Size

Retote R871 (R909) so that at the center of the top and bottom horizontal lines, these lines are the same height as the green lines and that any offset at top and bottom is equal.



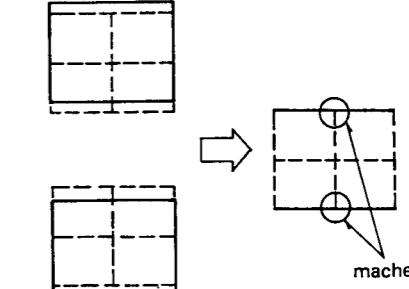
⑫ (㉝) Horizontal Skew

Rotate R876 (R913) so that the horizontal center line is at the center and equal distance at each end from the green horizontal center line.



⑬ (㉞) Vertical Linearity

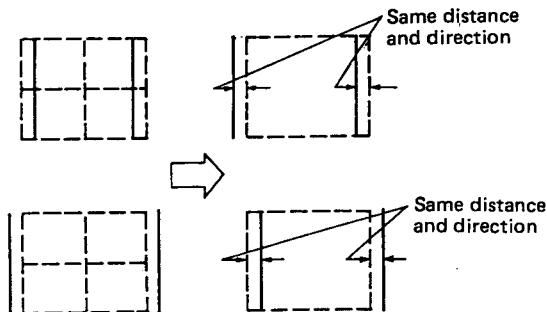
Rotate R873 (R911) so that the center of the top and bottom horizontal lines match the center of the green top and bottom lines.



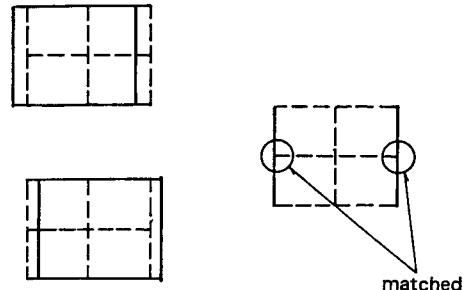
If you can not converge the top and bottom lines readjust ⑪ (㉜) (Vertical Size)

⑬ (34) Horizontal Size

Rotate R898 (R935) so that at the center of the left and right vertical lines, these lines are the same width as the green lines and that any off set at left and right is equal.

**⑭ (35) Horizontal Linearity**

Rotate R900 (R937) so that the center of the right and left vertical lines match the center of the green right and left lines.



If you can not converge the right and left lines, readjust ⑬ (34) (Horizontal size)

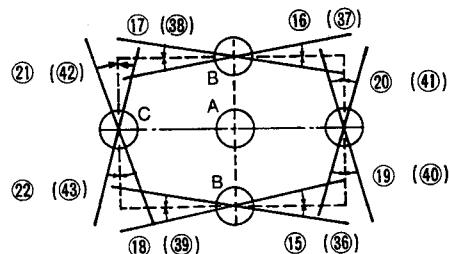
SUB 1 Adjustment ⑯ to ㉑ (㉖ to ㉗)

Refer adjust corner convergence (⑯ to ㉑ (㉖ to ㉗).

- A. Confirm that the horizontal and vertical center lines of all three rasters cross at the center.
- B. Confirm that the center of the top and bottom horizontal lines of all three rasters are converged at the center point.
- C. Confirm that the center of the left and right vertical lines of all three rasters are converged at the center point. If A, B and C are all converged properly.

If they are not converged properly, readjust the main dynamic convergence control SUB 1 control cannot compensate for misconvergence.

Converge the four corners using controls ⑯ to ㉑ (㉖ to ㉗).

**SUB 2 Adjustment**

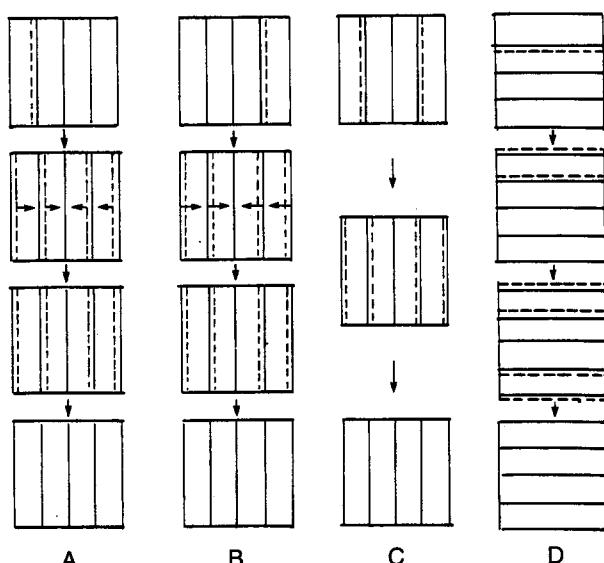
- A.B When the Horizontal linearity is off inside the left (or right) edge of the screen, adjust R7023 (R7024) so that the linearity is offset across the screen towards the center.

By adjusting the right horizontal size R887 (R924), and the horizontal linearity R900 (R937) controls alternately, adjust the picture so that the deviation from the green raster is equal across the screen.

Adjust R898 (R935) the horizontal width control to converge all the vertical lines on the green raster.

- C. When the Horizontal linearity is off inside both edges of the screen, adjust R7023 (R7024) so that the linearity is offset across the screen towards the center.

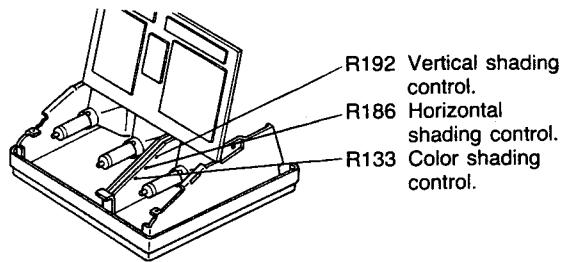
Adjust R898 (R935) the horizontal width control to converge all the vertical lines on the green raster.



- D. When the linearity is off outside the top (or bottom) edge of the screen, adjust R7012 (R7013) and the vertical linearity R873 (R911) controls alternately, adjust the picture so that the deviation from the green raster is equal across the screen. Adjust R871 (R909) the vertical width control to converge all the horizontal lines on the green raster.

11. Shading Connection

Input a white pattern or snow noise signal and turn the Colour Control fully counterclockwise. If brightness or colour appears uneven, adjust the following controls.



| | | |
|---|---|--|
| | | |
| Redish or Blueish | Redish or Blueish | Brighter or Darker |
| Adjust the color shading control (R133), so that entire picture is white. | Adjust the Horizontal shading control (R192), so that the Brightness level is even across the screen. | Adjust the Vertical shading control (R186), so that the Brightness level is even from top to bottom. |

12. RGB Mode Adjustment

If the abnormal conditions listed below occur when a personal computer is connected to the RGB inputs, the unit is probably not defective. Adjust the respective control to compensate for each condition. The controls indicated have no affect when the unit is not in the RGB mode.

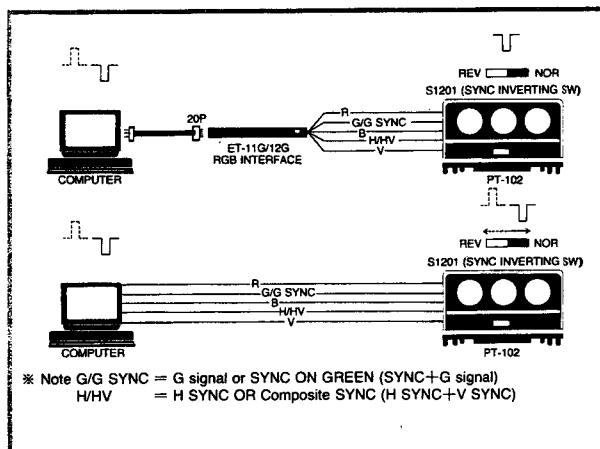
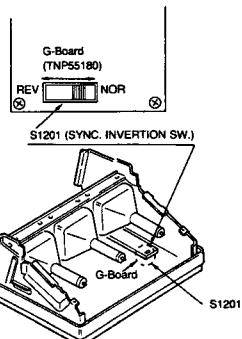
- When the picture is shifted to either the left or the right, adjust its position with the H-Centering control (R568) on the C-Board.
- When vertical rolling occurs adjust the V-Hold control (R424) on the C-Board.

Systems Applications

SYNC INVERTING SWITCH

The purpose of this switch (S1201) is for changing the polarity of the synchronizing signal from the computer.

Normally this switch is at **NOR** position and located on the **G** Board (TNP55180).

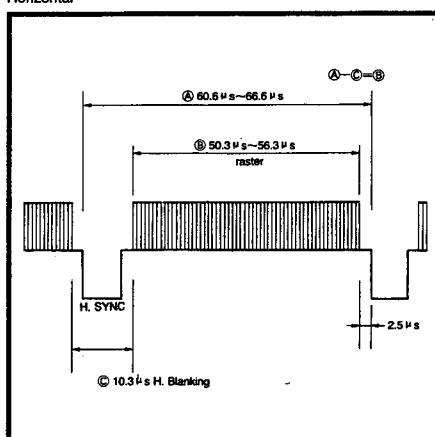
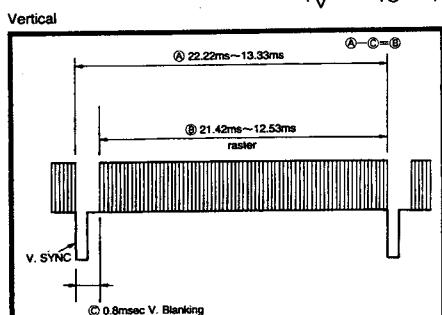


Computer Application

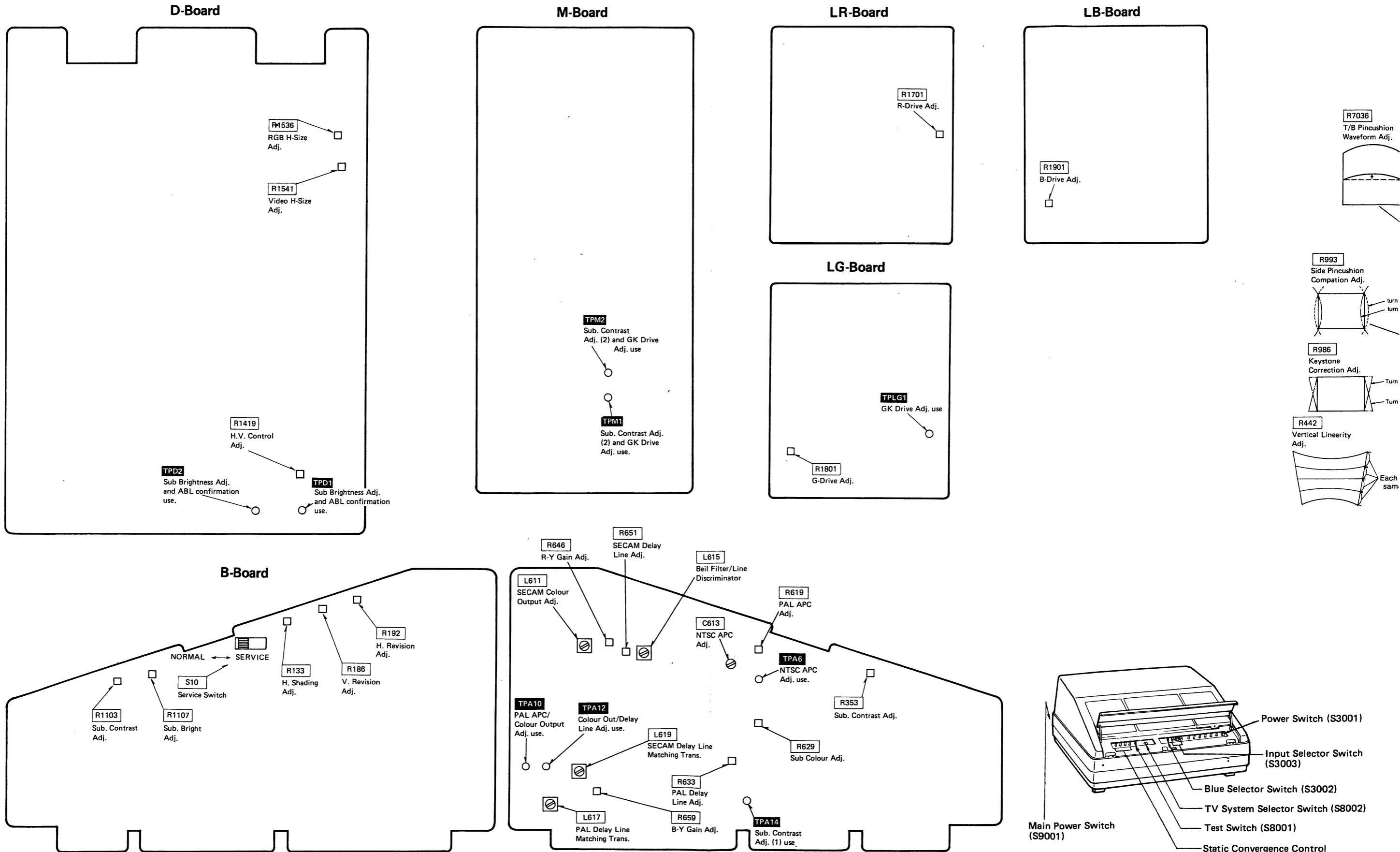
PT-102N/GN/AN/SN FREQUENCY TIMING CHART

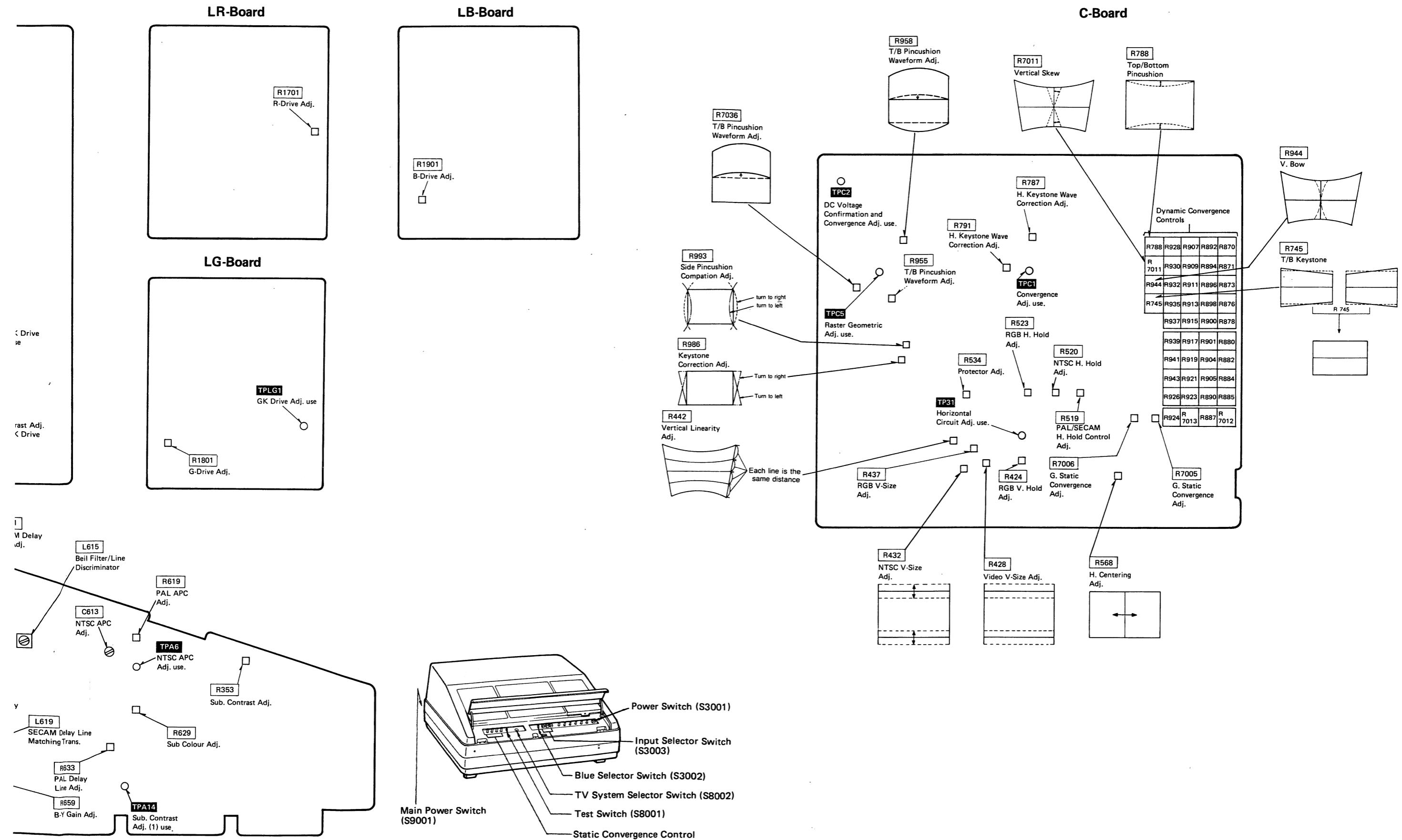
When PT-102N/GN/AN/SN is connected to the computer, check the scanning frequency (or time), display time and blanking time of horizontal and vertical, compare with the following timing chart.

* Reference: PT-102N/GN/AN/SN $f_H = 15.75 \pm 0.75$ kHz
 $f_V = 45 \sim 75$ Hz

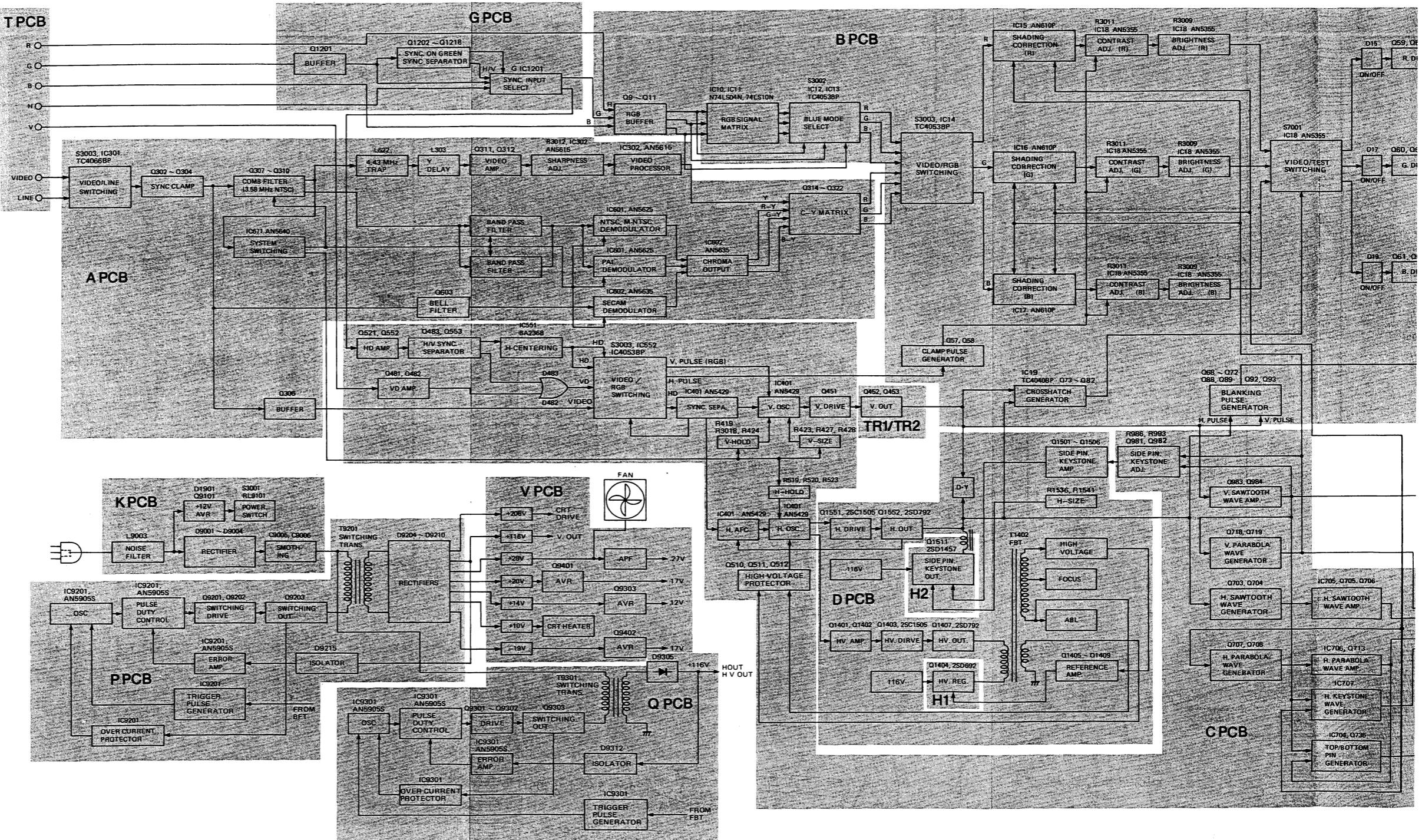


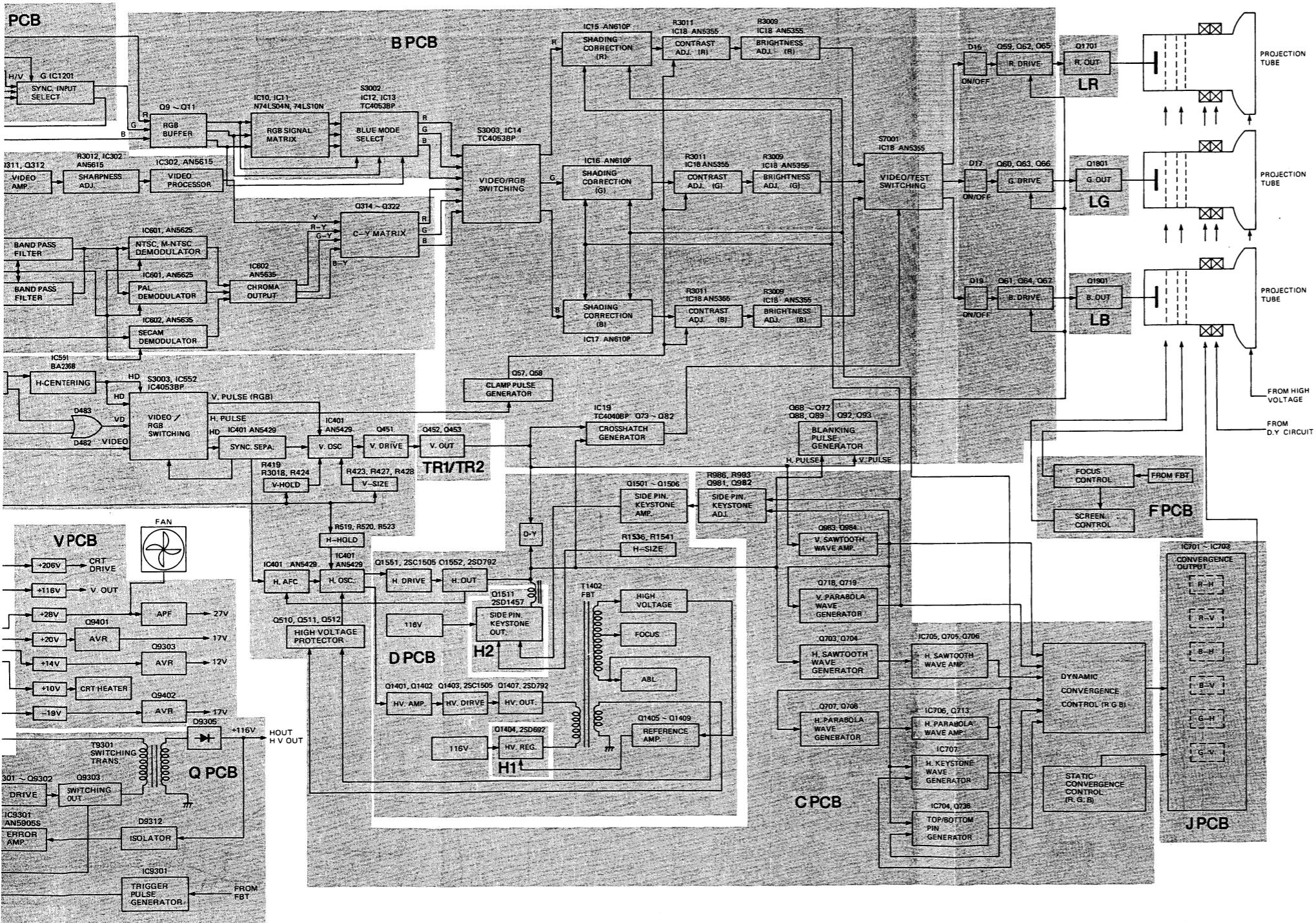
LOCATION OF TEST POINT AND CONTROLS



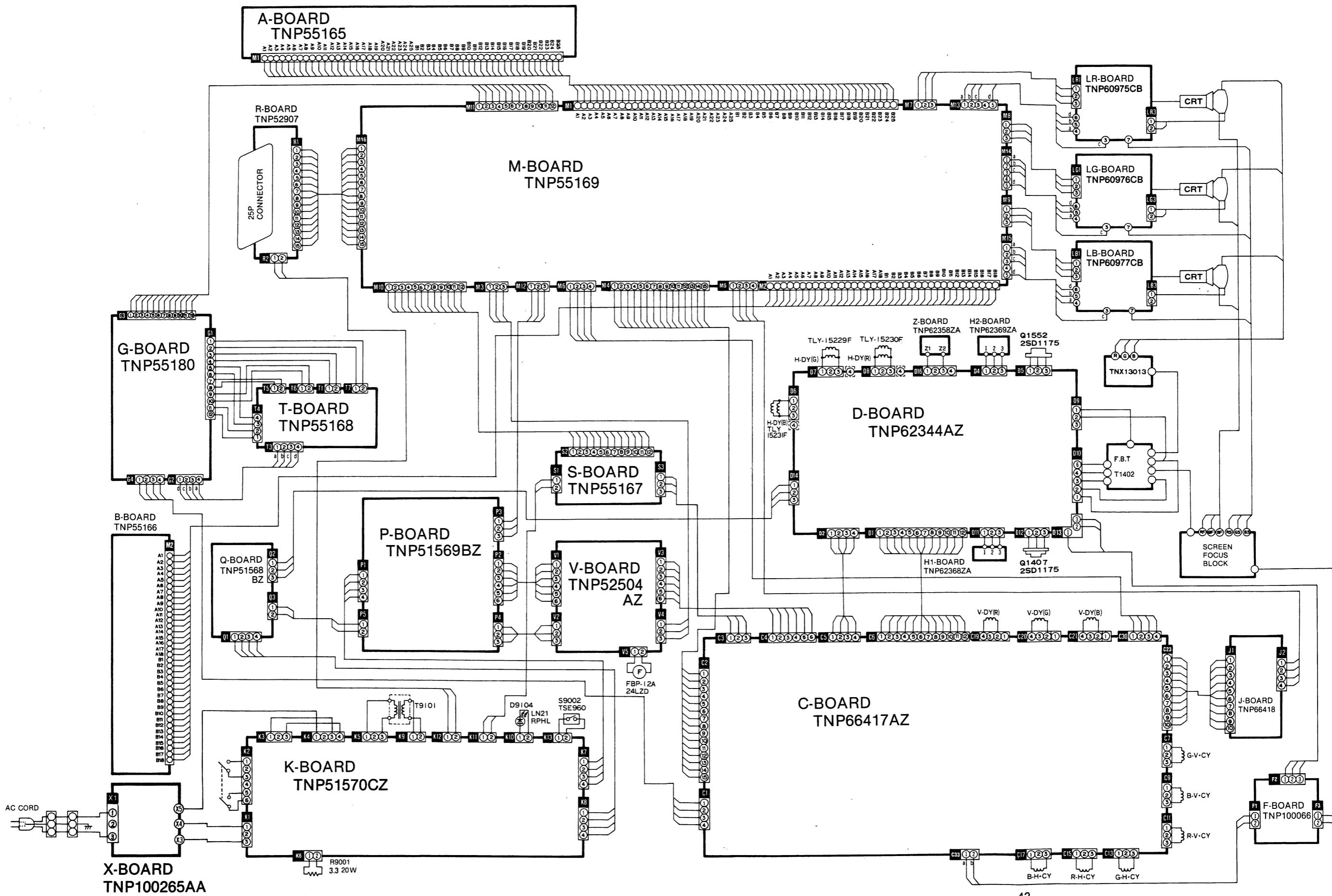


BLOCK DIAGRAM

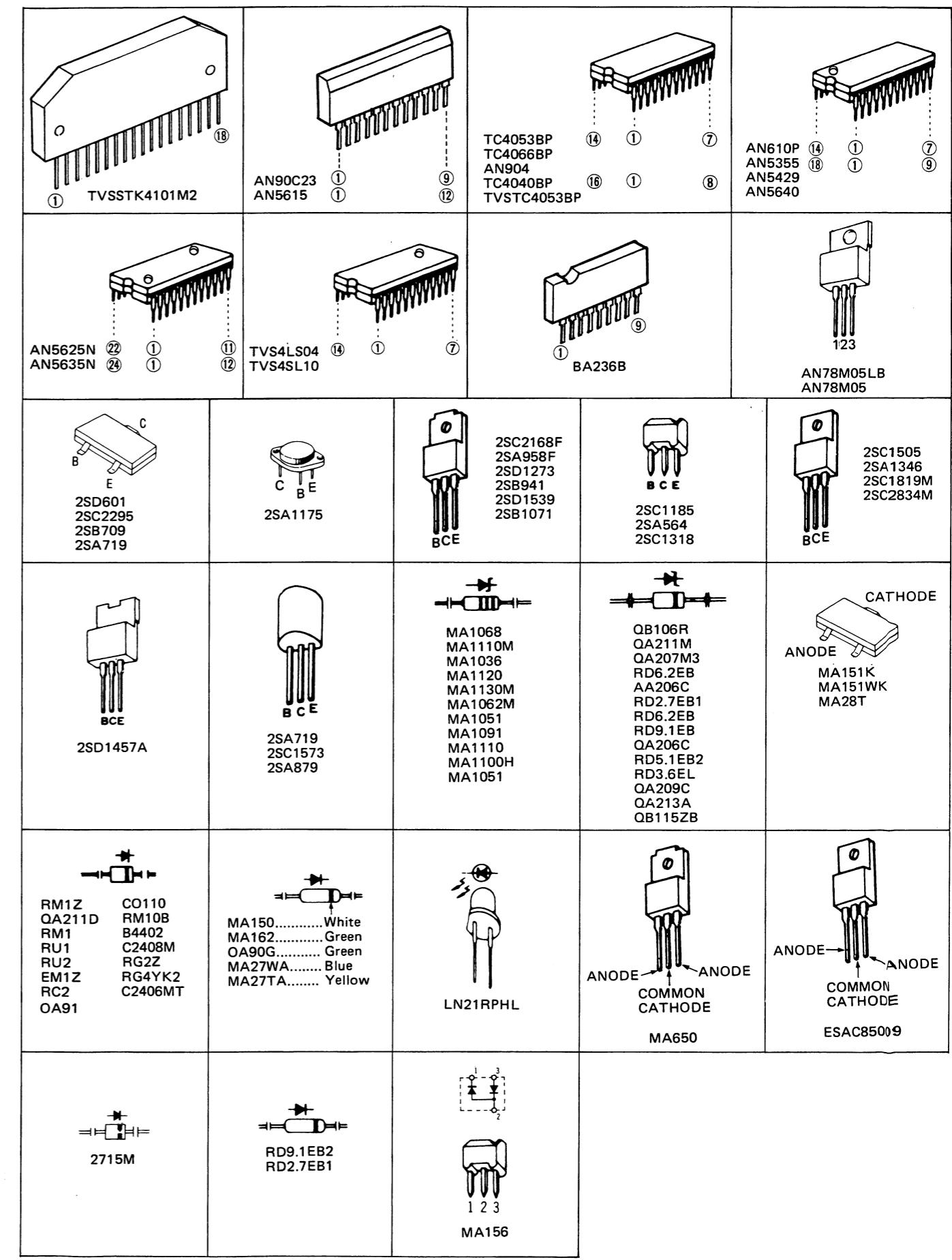
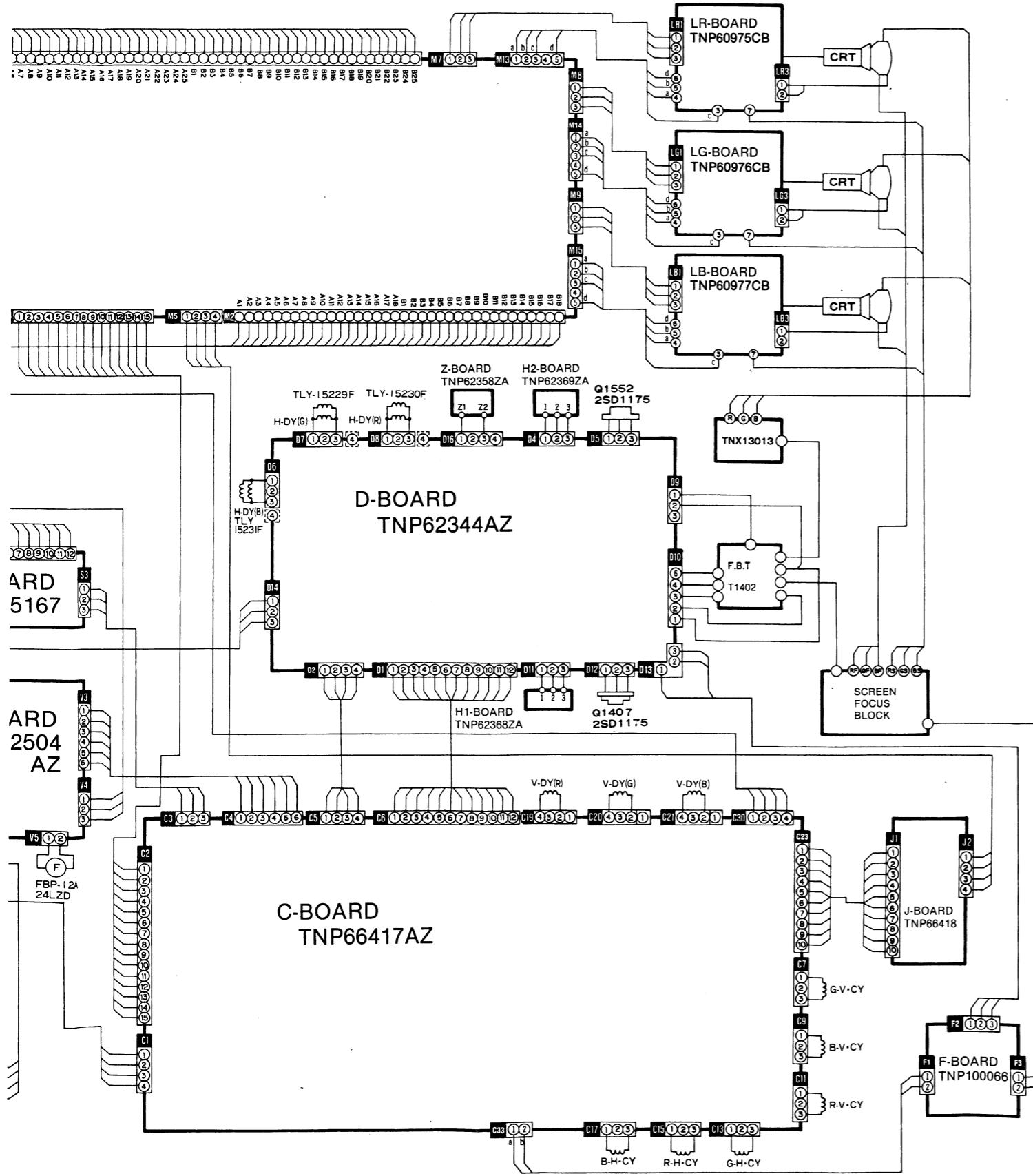




INTERCONNECTION



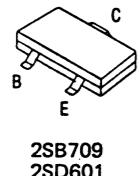
TERMINAL GUIDE OF IC'S, TRANSISTOR ADN DIODES



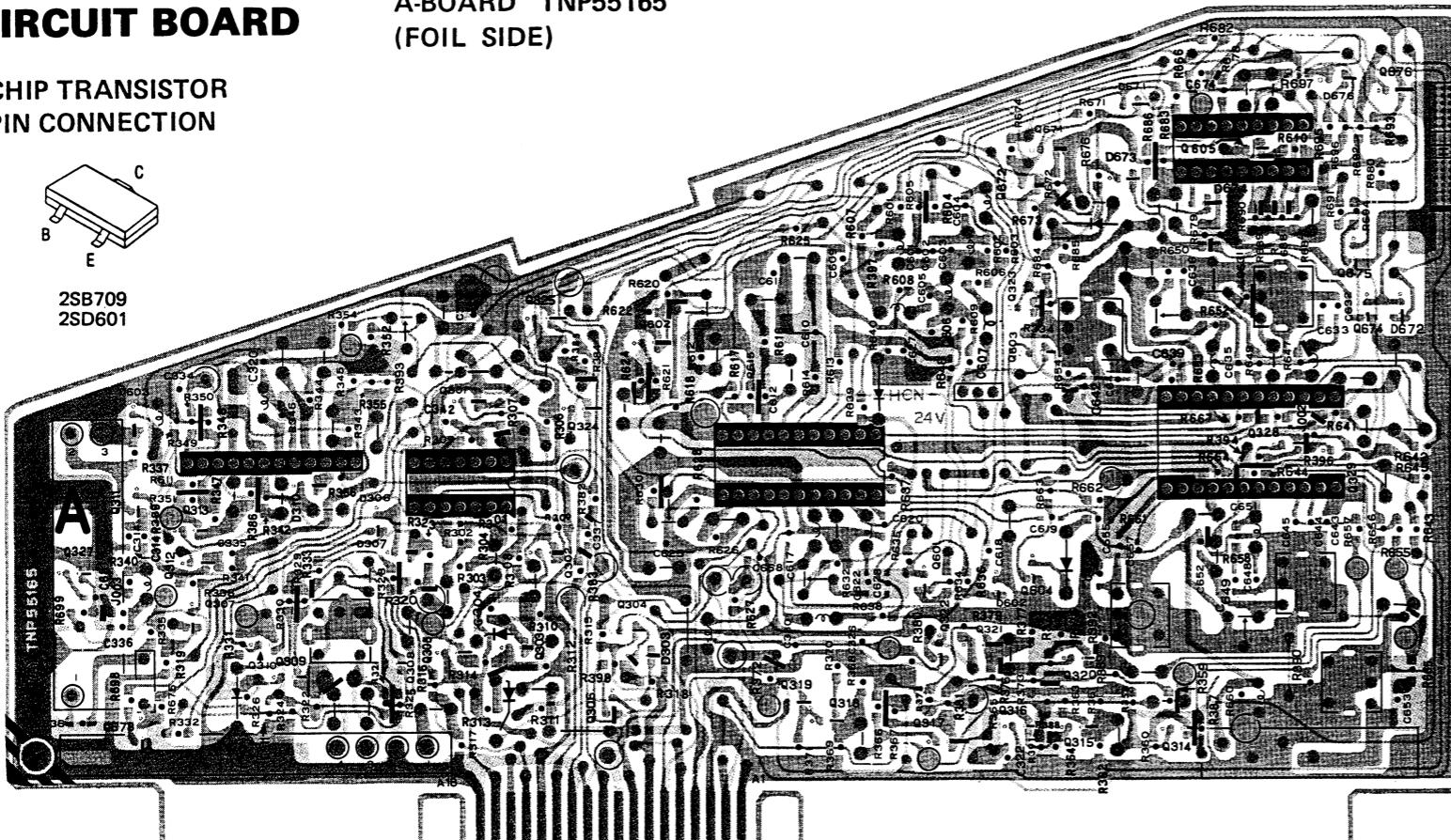
CIRCUIT BOARD

A-BOARD TNP55165
(FOIL SIDE)

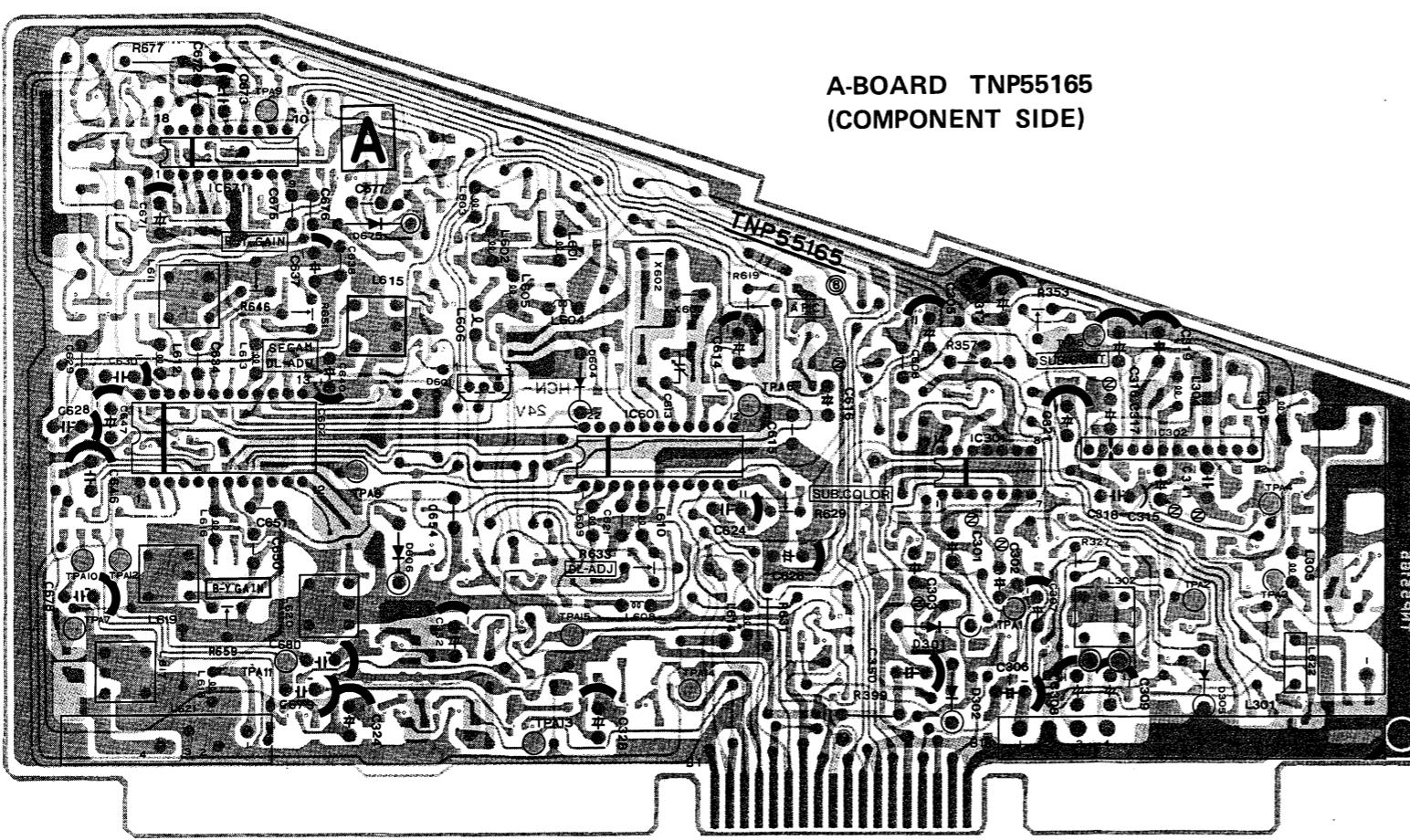
CHIP TRANSISTOR PIN CONNECTION



2SB709
2SD601



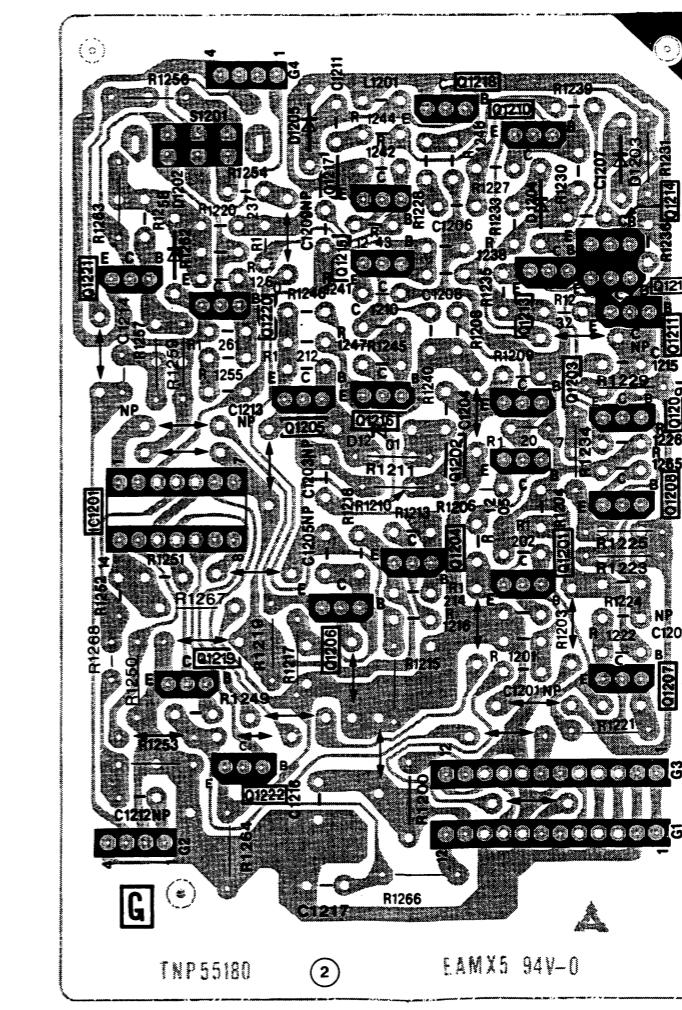
A-BOARD TNP55165
(COMPONENT SIDE)



| A-BOARD | | | | | |
|------------|---------|---------|--|---------|--|
| I.C | | Q604 | | E-5 (F) | |
| IC301 | B-4 (C) | Q605 | | F-5 (F) | |
| IC302 | B-5 (C) | Q671 | | F-5 (F) | |
| IC601 | B-3 (C) | Q672 | | F-4 (F) | |
| IC602 | B-2 (C) | Q673 | | D-1 (F) | |
| IC671 | C-2 (C) | Q674 | | E-6 (F) | |
| Transistor | | Q675 | | F-6 (F) | |
| | | Q676 | | F-6 (F) | |
| VR | | | | | |
| R327 | | B-5 (C) | | | |
| R353 | | C-5 (C) | | | |
| R619 | | C-4 (C) | | | |
| R629 | | B-4 (C) | | | |
| R633 | | B-3 (C) | | | |
| R646 | | C-2 (C) | | | |
| R651 | | C-2 (C) | | | |
| R659 | | A-2 (C) | | | |
| Test Point | | | | | |
| TPA1 | | A-4 (C) | | | |
| TPA2 | | B-5 (C) | | | |
| TPA3 | | B-6 (C) | | | |
| TPA4 | | B-6 (C) | | | |
| TPA5 | | C-5 (C) | | | |
| TPA6 | | B-4 (C) | | | |
| TPA7 | | A-1 (C) | | | |
| TPA8 | | B-2 (C) | | | |
| TPA9 | | C-2 (C) | | | |
| TPA10 | | C-1 (C) | | | |
| TPA11 | | A-2 (C) | | | |
| TPA12 | | B-1 (C) | | | |
| TPA13 | | A-3 (C) | | | |
| TPA14 | | A-3 (C) | | | |
| TPA15 | | A-3 (C) | | | |

ADDRESS INFORMATION

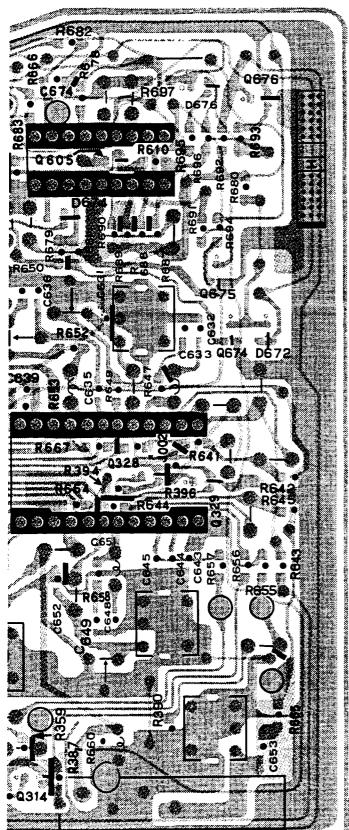
G-BOARD TNP55180



| G-BOARD | |
|-------------------|------------|
| I.C | |
| IC1201 | B-7 |
| Transistor | |
| Q1201 | B-8 |
| Q1202 | C-8 |
| Q1203 | C-8 |
| Q1204 | B-8 |
| Q1205 | C-7 |
| Q1206 | B-7 |
| Q1207 | B-7 |
| Q1208 | B-8 |
| Q1209 | C-8 |
| Q1210 | D-8 |
| Q1211 | C-8 |
| Q1212 | C-8 |
| Q1213 | C-8 |
| Q1214 | C-8 |
| Q1215 | C-8 |
| Q1216 | C-8 |
| Q1217 | D-7 |
| Q1218 | D-8 |
| Q1219 | B-7 |

ADDRESS INFORMATION

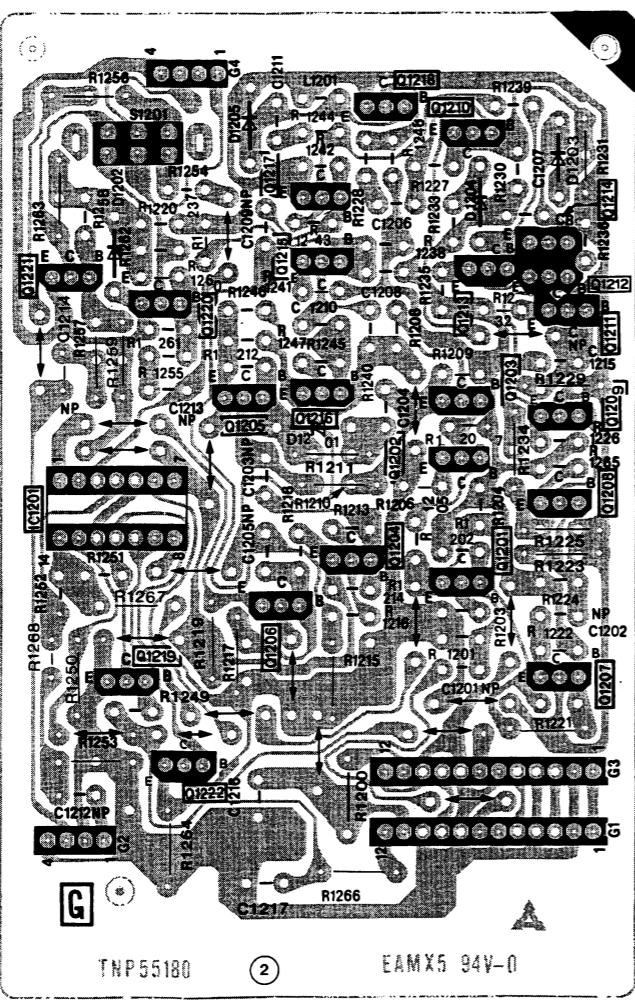
PT-102N/GN/AN/SN PT-102N/GN/AN/SN



| A-BOARD | | | |
|------------|-----|------|---|
| I.C | B-4 | E-5 | F |
| IC301 | C | Q604 | F |
| IC302 | C | Q605 | F |
| IC601 | C | Q671 | F |
| IC602 | C | Q672 | F |
| IC671 | C | Q673 | F |
| | | Q674 | F |
| | | Q675 | F |
| | | Q676 | F |
| Transistor | | | |
| Q301 | E-3 | B-5 | C |
| Q302 | E-3 | C-5 | C |
| Q303 | D-3 | C-4 | C |
| Q304 | E-3 | B-4 | C |
| Q305 | D-2 | B-3 | C |
| Q306 | D-3 | C-2 | C |
| Q307 | E-2 | C-2 | C |
| Q308 | D-2 | A-2 | C |
| Q309 | D-2 | | |
| Q310 | D-2 | | |
| Q311 | E-1 | | |
| Q312 | E-1 | A-4 | C |
| Q313 | E-2 | B-5 | C |
| Q314 | D-5 | B-6 | C |
| Q315 | D-5 | B-6 | C |
| Q316 | D-4 | C-5 | C |
| Q317 | D-4 | B-4 | C |
| Q318 | D-4 | A-1 | C |
| Q319 | D-4 | B-2 | C |
| Q320 | D-5 | C-2 | C |
| Q321 | D-4 | C-1 | C |
| Q323 | F-4 | A-2 | C |
| Q324 | E-3 | B-1 | C |
| Q325 | F-3 | A-3 | C |
| Q601 | E-4 | A-3 | C |
| Q602 | E-1 | A-3 | C |
| Q603 | E-4 | A-3 | C |
| VR | | | |
| R327 | | | |
| R353 | | | |
| R619 | | | |
| R629 | | | |
| R633 | | | |
| R646 | | | |
| R651 | | | |
| R659 | | | |
| Test Point | | | |
| TPA1 | | | |
| TPA2 | | | |
| TPA3 | | | |
| TPA4 | | | |
| TPA5 | | | |
| TPA6 | | | |
| TPA7 | | | |
| TPA8 | | | |
| TPA9 | | | |
| TPA10 | | | |
| TPA11 | | | |
| TPA12 | | | |
| TPA13 | | | |
| TPA14 | | | |
| TPA15 | | | |

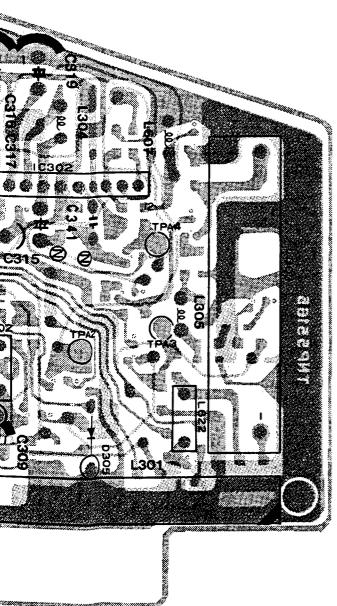
ADDRESS INFORMATION
C ... COMPONENT SIDE
F ... FOIL SIDE

G-BOARD TNP55180

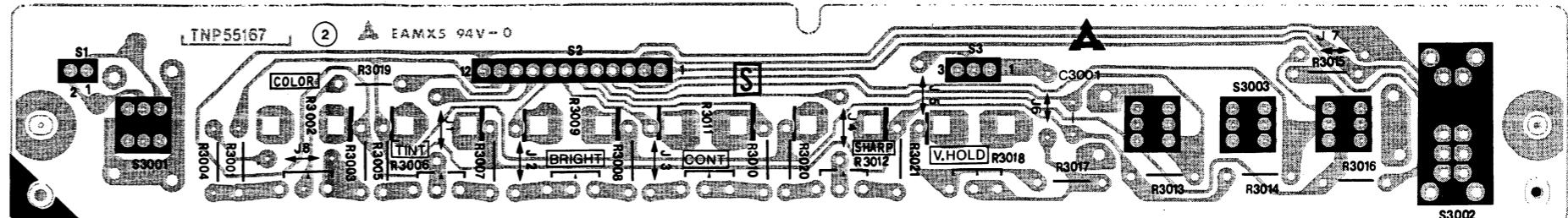


| G-BOARD | |
|------------|-----|
| I.C | B-7 |
| IC1201 | |
| Transistor | |
| Q1201 | B-8 |
| Q1202 | C-8 |
| Q1203 | C-8 |
| Q1204 | B-8 |
| Q1205 | C-7 |
| Q1206 | B-7 |
| Q1207 | B-7 |
| Q1208 | B-8 |
| Q1209 | C-8 |
| Q1210 | D-8 |
| Q1211 | C-8 |
| Q1212 | C-8 |
| Q1213 | C-8 |
| Q1214 | C-8 |
| Q1215 | C-8 |
| Q1216 | C-8 |
| Q1217 | D-7 |
| Q1218 | D-8 |
| Q1219 | B-7 |

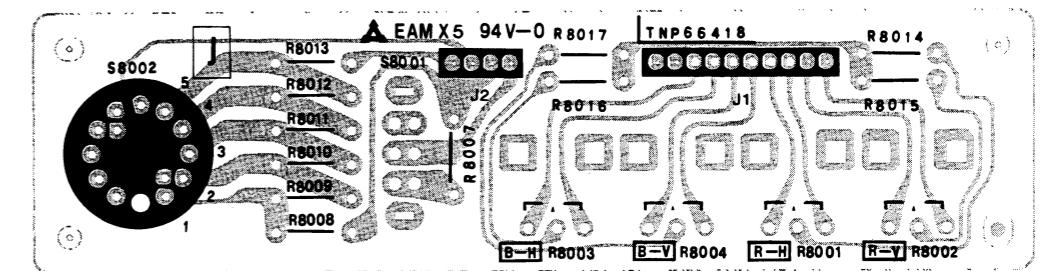
ADDRESS INFORMATION



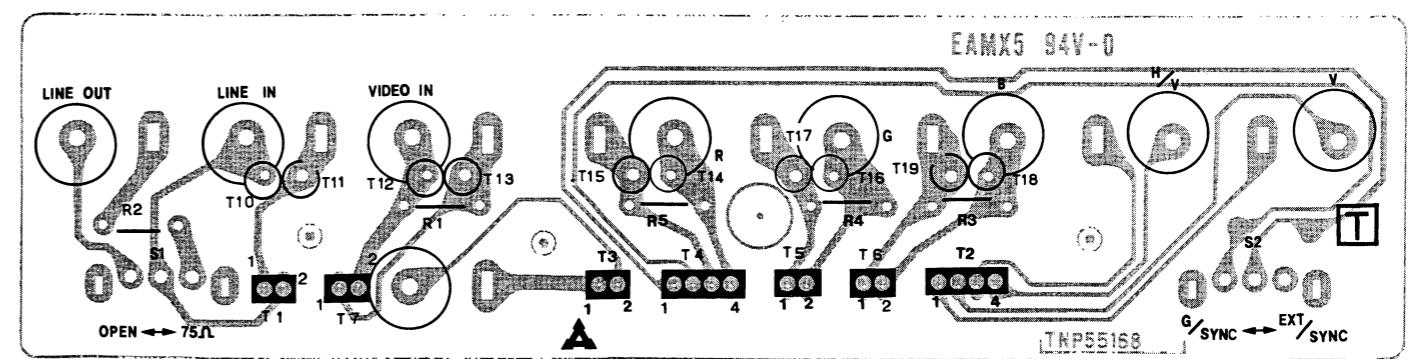
S-BOARD TNP55167



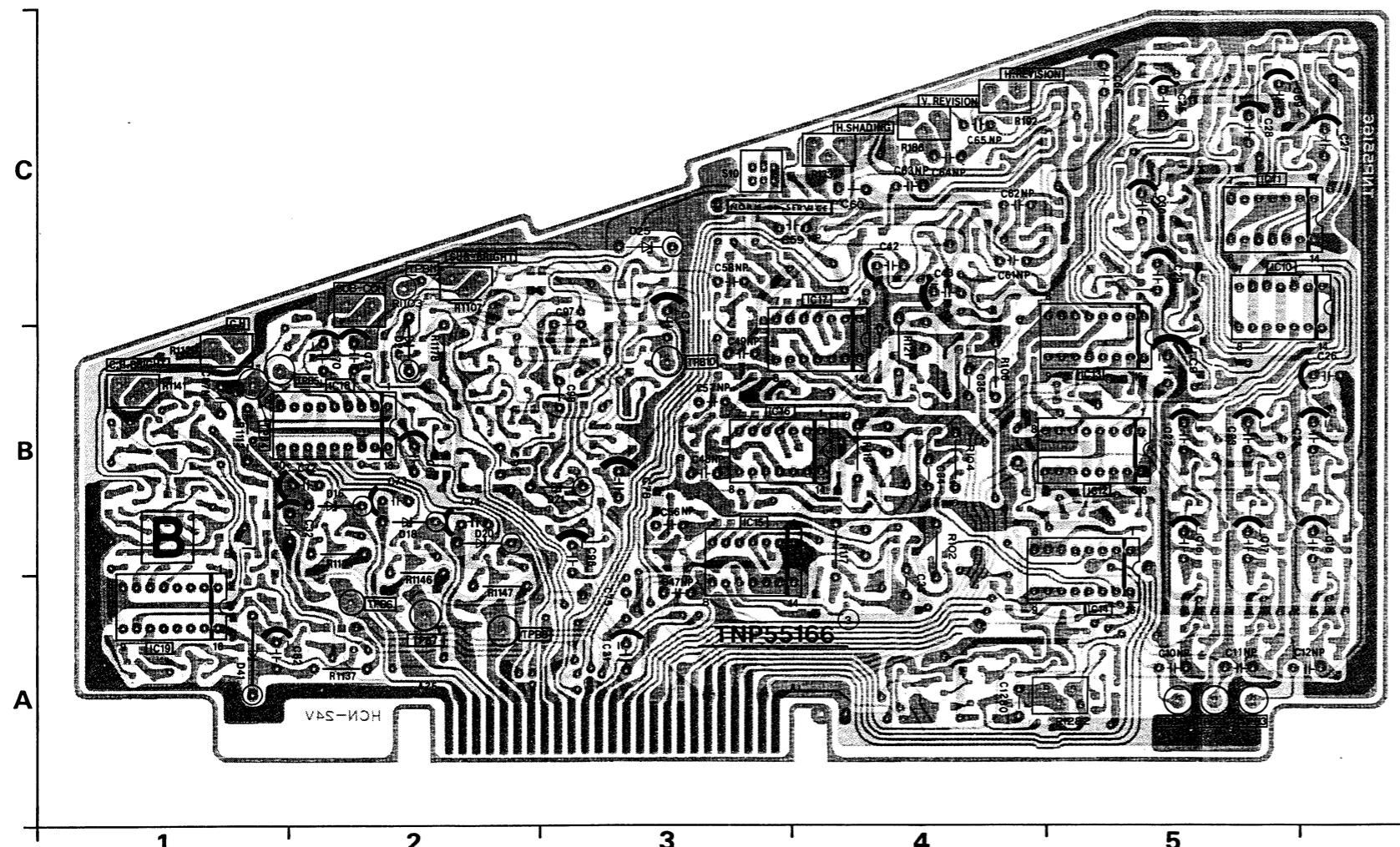
J-BOARD TNP66418



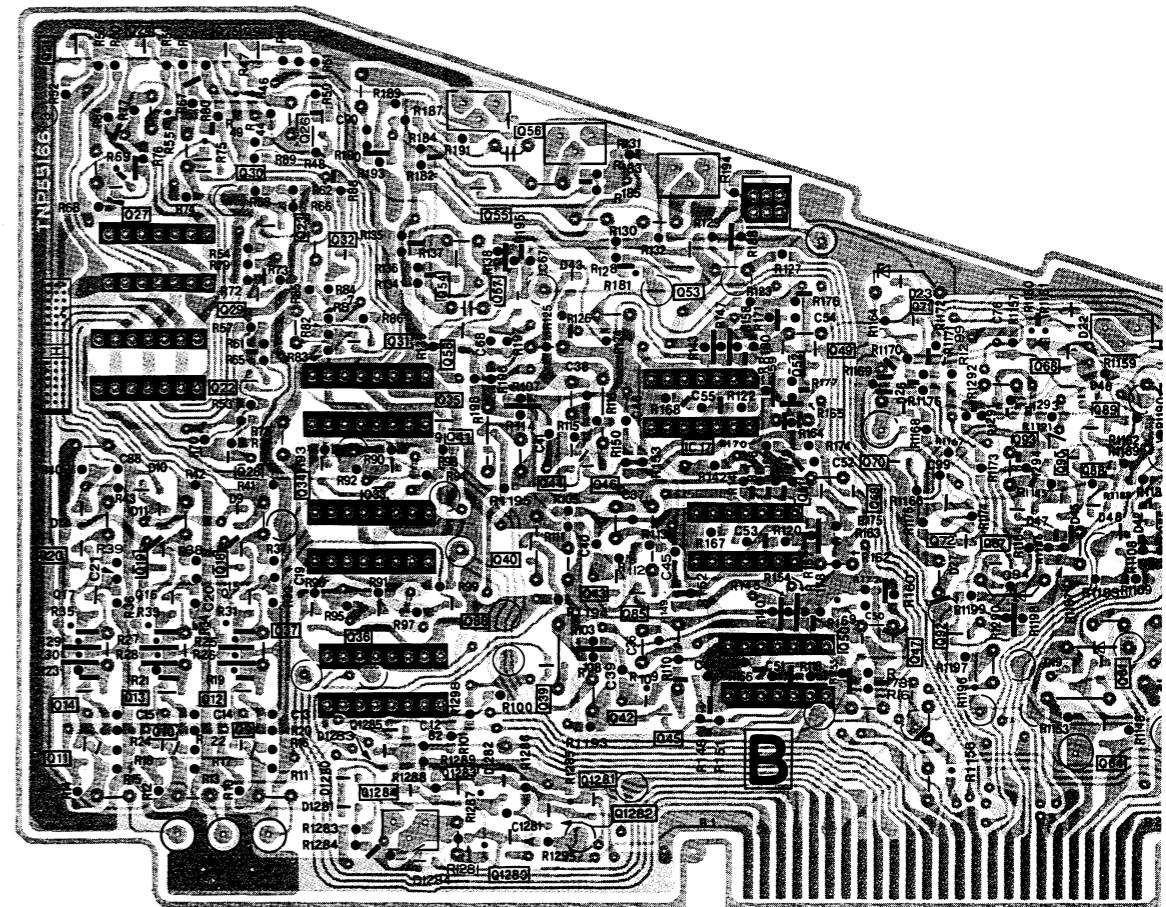
T-BOARD TNP55168



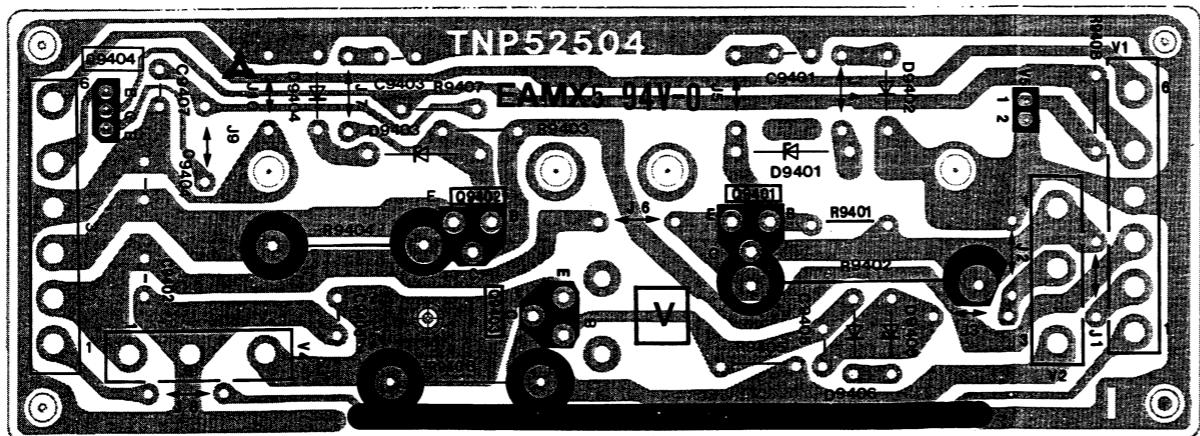
B-BOARD TNP55166
(COMPONENT SIDE)



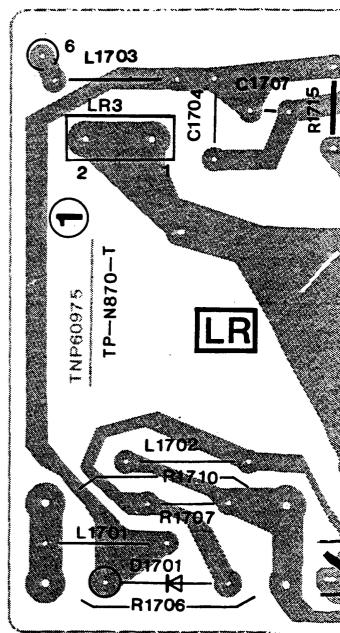
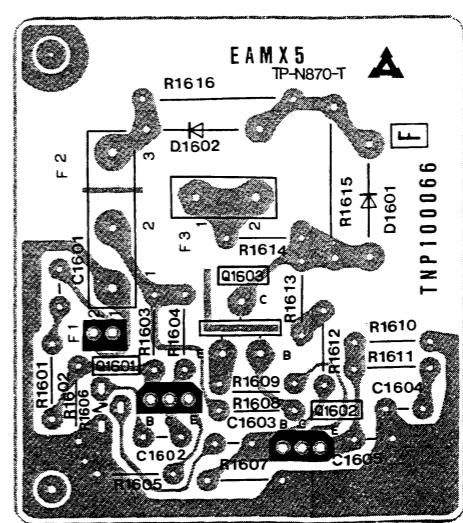
B-BOARD TNP55166
(FOIL SIDE)



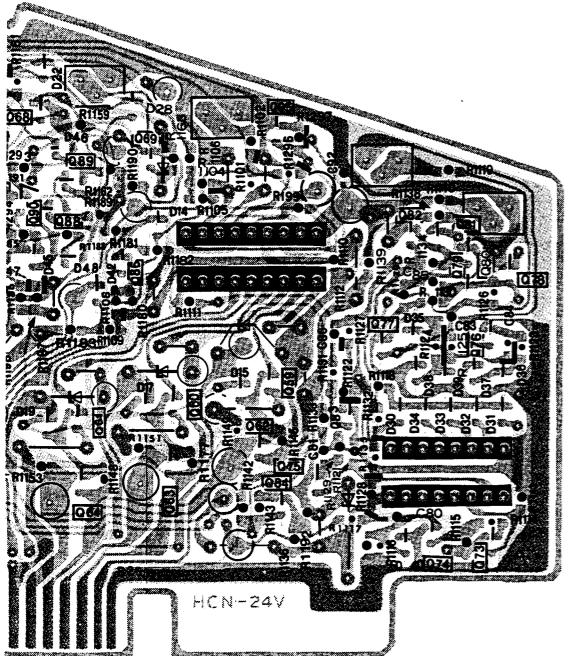
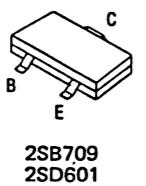
V-BOARD TNP52504AZ



F-BOARD TNP100066

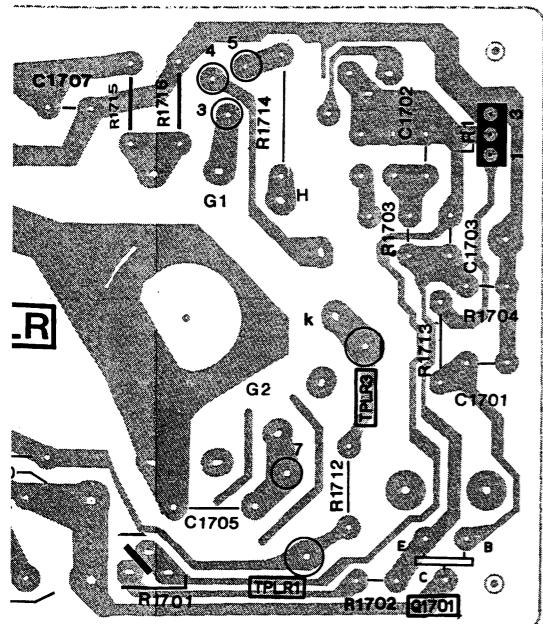


**CHIP TRANSISTOR
PIN CONNECTION**



10 11

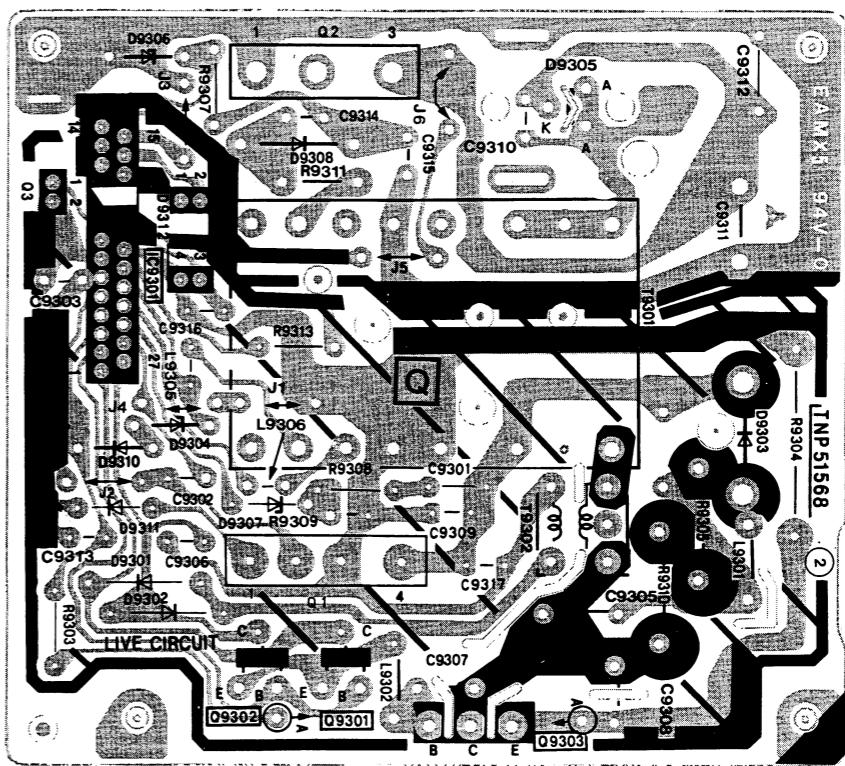
R-BOARD TNP60975CB



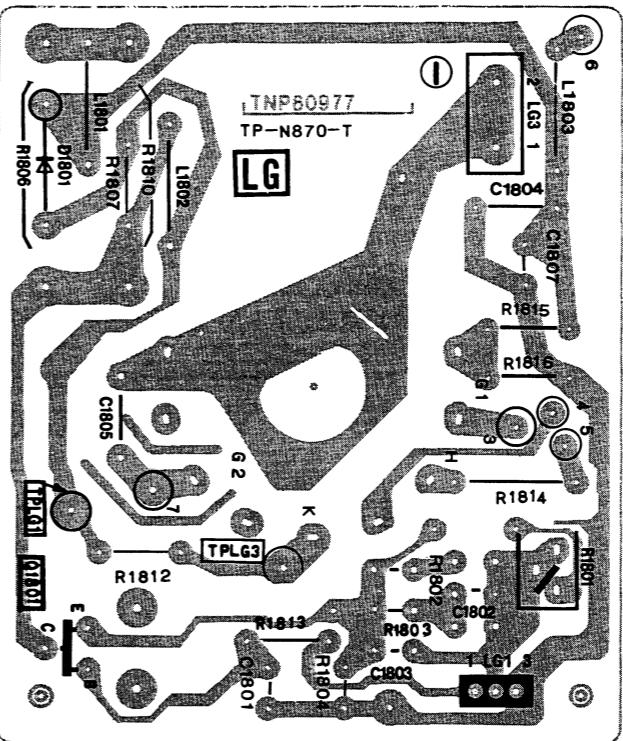
ADDRESS INFORMATION
© ... COMPONENT SIDE
© ... FOIL SIDE

| B-BOARD | | |
|-------------------|-----|---|
| I.C | | |
| IC10 | C-5 | © |
| IC11 | C-5 | © |
| IC12 | B-5 | © |
| IC13 | B-5 | © |
| IC14 | A-5 | © |
| IC15 | B-3 | © |
| IC16 | B-3 | © |
| IC17 | B-4 | © |
| IC18 | B-2 | © |
| IC19 | A-2 | © |
| Transistor | | |
| Q9 | A-7 | © |
| Q10 | A-7 | © |
| Q11 | A-6 | © |
| Q12 | A-7 | © |
| Q13 | B-6 | © |
| Q14 | B-6 | © |
| Q15 | B-7 | © |
| Q16 | B-6 | © |
| Q17 | B-6 | © |
| Q18 | B-7 | © |
| Q19 | B-7 | © |
| Q20 | B-6 | © |
| Q21 | C-6 | © |
| Q22 | C-7 | © |
| Q23 | C-7 | © |
| Q24 | C-7 | © |
| Q25 | C-7 | © |
| Q26 | C-7 | © |
| Q27 | C-7 | © |
| Q28 | B-7 | © |
| Q29 | C-7 | © |
| Q30 | C-7 | © |
| Q31 | C-7 | © |
| Q32 | C-7 | © |
| Q33 | B-7 | © |
| Q34 | B-7 | © |
| Q35 | B-8 | © |
| Q36 | B-7 | © |
| Q37 | B-7 | © |
| Q38 | B-8 | © |
| Q39 | B-8 | © |
| Q40 | B-8 | © |
| Q41 | B-8 | © |
| Q42 | A-8 | © |
| Q43 | B-8 | © |
| Q44 | B-8 | © |
| Q45 | A-8 | © |
| Q46 | B-8 | © |
| Q47 | B-9 | © |
| Q48 | B-9 | © |
| Q49 | C-9 | © |
| Q50 | B-9 | © |
| Q51 | B-9 | © |
| Q52 | C-9 | © |
| Q53 | C-8 | © |
| Q54 | C-7 | © |
| VR | | |
| R133 | C-4 | © |
| R186 | C-4 | © |
| R192 | C-4 | © |
| R1103 | C-2 | © |
| R1107 | C-2 | © |
| R1120 | B-1 | © |
| R1141 | B-1 | © |
| Test Point | | |
| TPB1 | A-5 | © |
| TPB2 | A-5 | © |
| TPB3 | A-5 | © |
| TPB4 | B-1 | © |
| TPB5 | B-2 | © |
| TPB6 | A-2 | © |
| TPB7 | A-2 | © |
| TPB8 | A-2 | © |
| TPB10 | B-3 | © |
| TPB11 | C-2 | © |

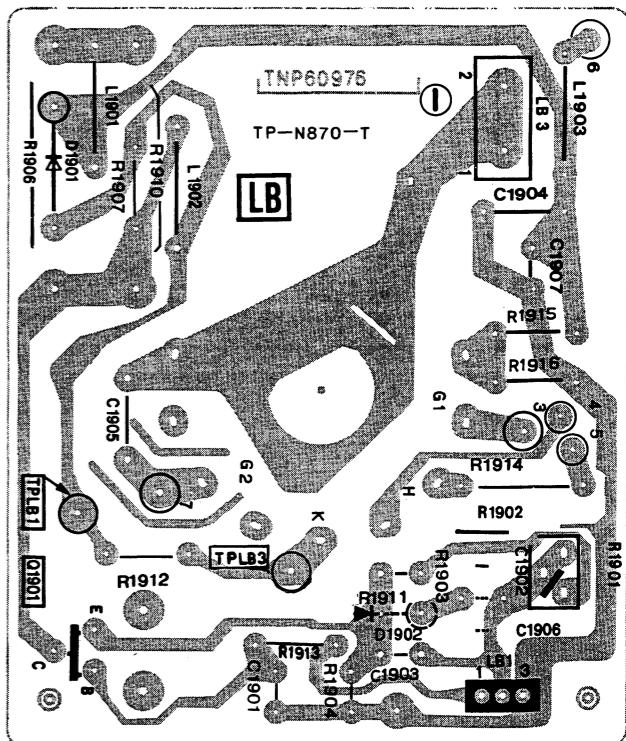
Q-BOARD TNP51568BZ



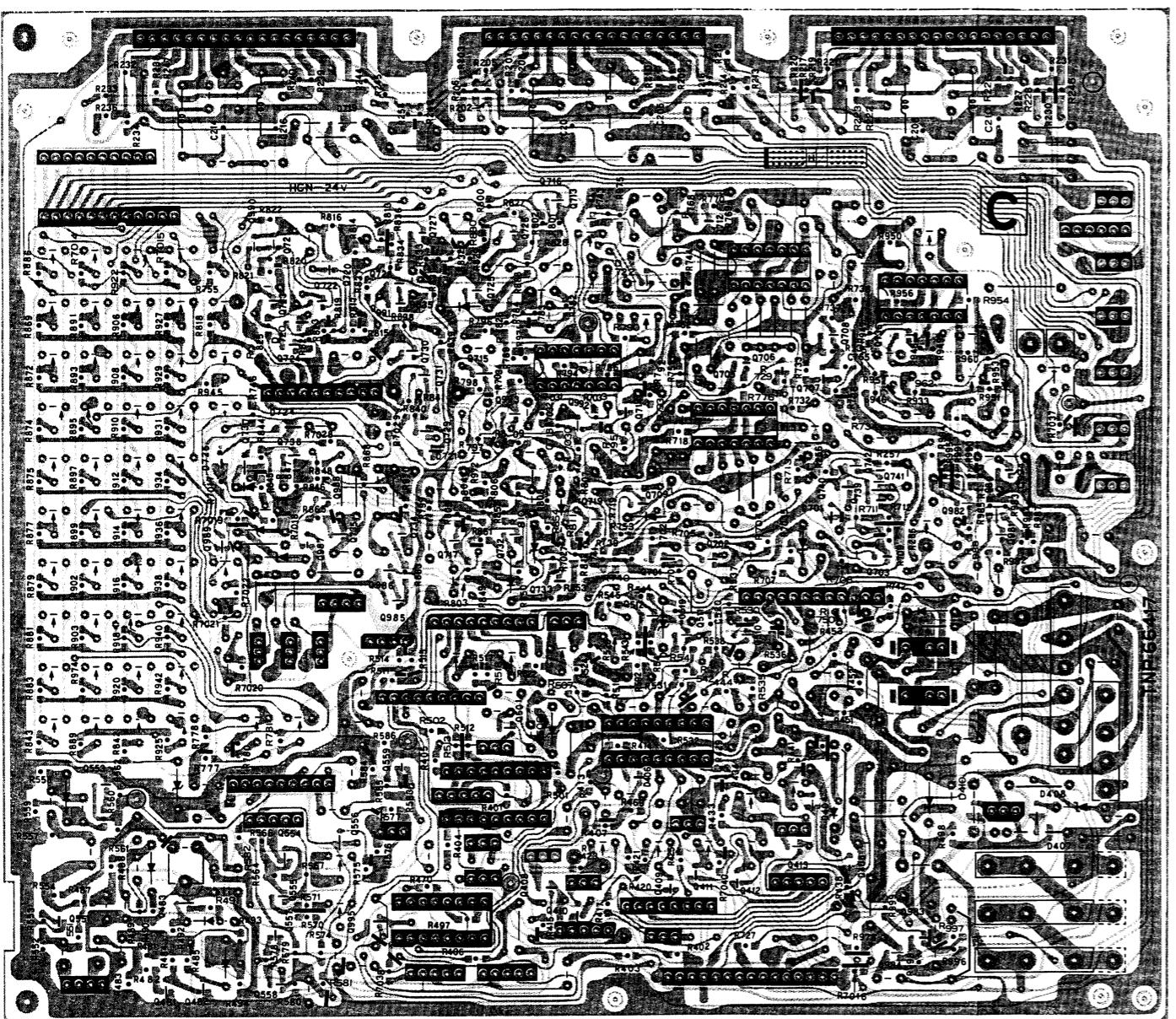
LG-BOARD TNP60976CB



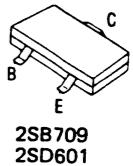
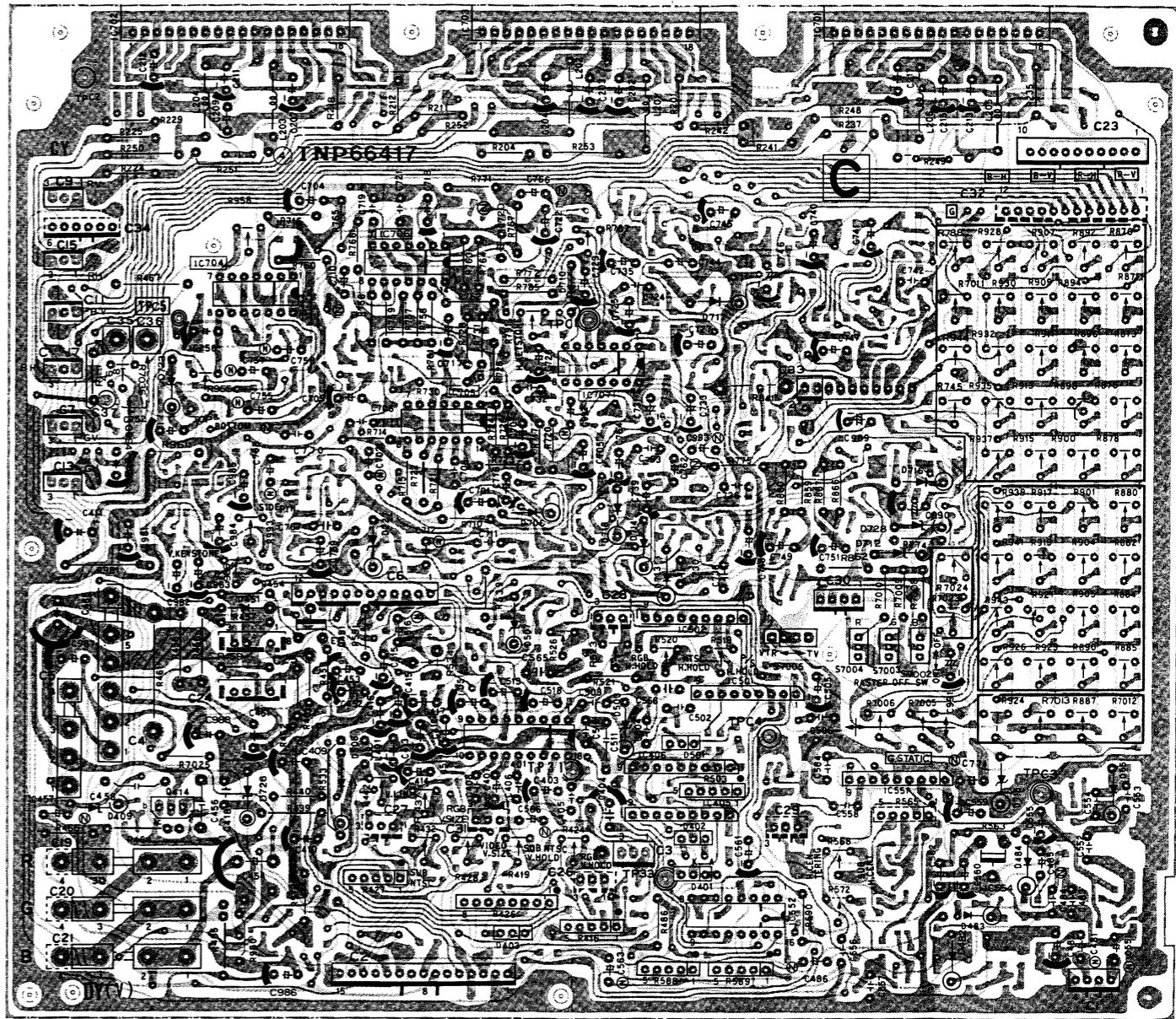
LB-BOARD TNP60975CB



**C-BOARD TNP66417AZ
(FOIL SIDE)**

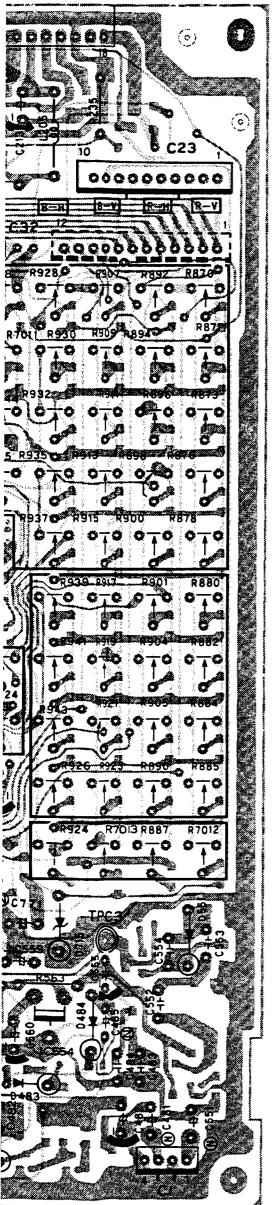


**C-BOARD TNP66417AZ
(COMPONENT SIDE)**



1 2 3 4 5 6 7 8

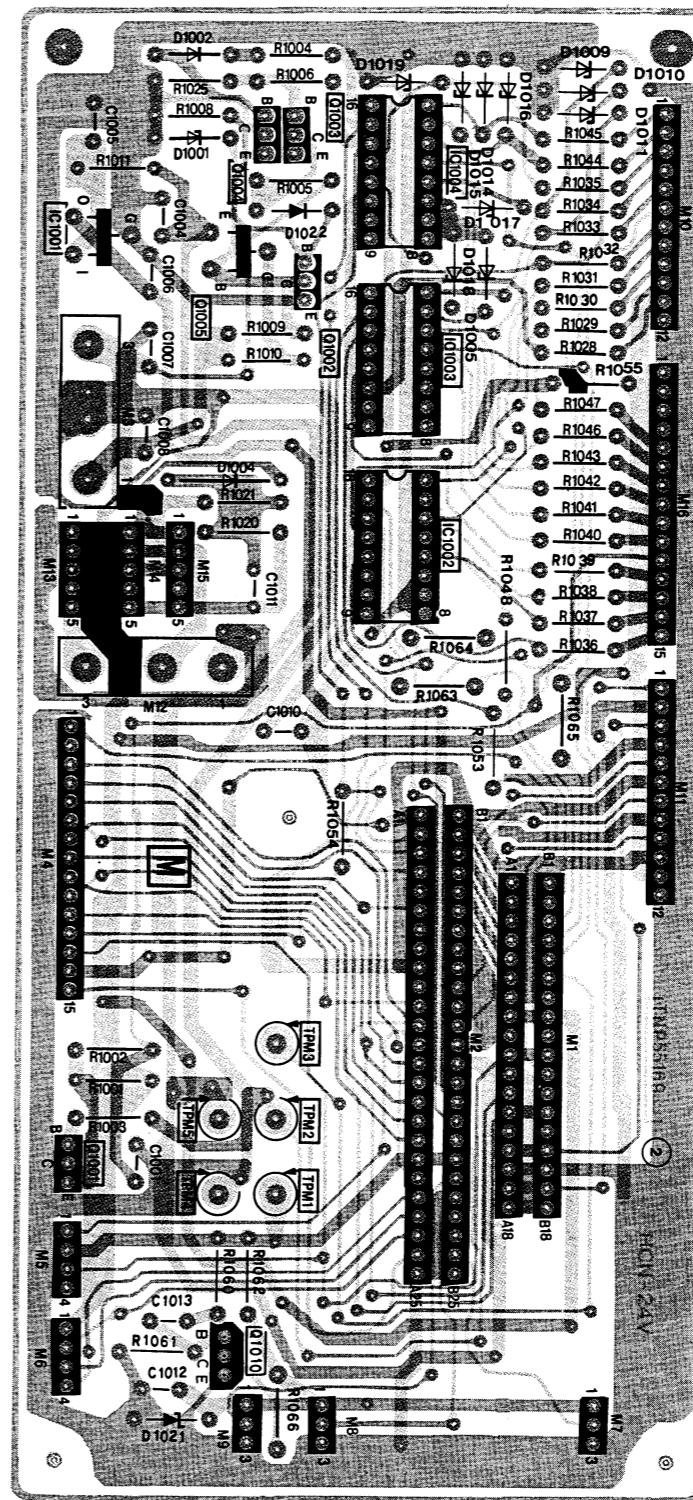
C



| C-BOARD | | |
|------------|-----|---|
| I.C | B-6 | C |
| IC401 | B-6 | C |
| IC405 | A-7 | C |
| IC406 | A-7 | C |
| IC501 | B-7 | C |
| IC502 | B-7 | C |
| IC551 | A-7 | C |
| IC552 | A-7 | C |
| IC554 | A-6 | C |
| IC704 | C-6 | C |
| IC705 | C-6 | C |
| IC706 | C-6 | C |
| IC707 | C-6 | C |
| Transistor | | |
| Q408 | A-2 | F |
| Q409 | A-3 | F |
| Q410 | A-1 | F |
| Q411 | A-3 | F |
| Q412 | A-3 | F |
| Q413 | A-3 | F |
| Q414 | A-5 | C |
| Q451 | B-6 | C |
| Q481 | A-1 | F |
| Q482 | A-1 | F |
| Q483 | A-1 | F |
| Q510 | B-3 | F |
| Q511 | B-3 | F |
| Q512 | B-3 | F |
| Q551 | A-1 | F |
| Q553 | A-1 | F |
| Q559 | B-2 | F |
| Q701 | B-3 | F |
| Q702 | B-3 | F |
| Q703 | B-4 | F |
| Q705 | C-3 | F |
| Q706 | C-3 | F |
| Q707 | C-3 | F |
| Q708 | C-3 | F |
| Q709 | B-3 | F |
| Q712 | C-3 | F |
| Q713 | C-3 | F |
| Q714 | C-3 | F |
| Q715 | C-2 | F |
| Q716 | C-2 | F |
| Q717 | B-2 | F |
| Q718 | B-3 | F |
| Q719 | B-3 | F |
| Q720 | C-2 | F |
| Q721 | C-2 | F |
| Q722 | C-2 | F |
| Q723 | C-2 | F |
| Q724 | C-2 | F |
| Q725 | C-2 | F |
| VR | | |
| R419 | A-6 | C |
| R424 | A-6 | C |
| R428 | A-6 | C |
| R432 | A-6 | C |
| R437 | A-6 | C |
| R442 | A-6 | C |
| R519 | B-7 | C |
| R520 | B-7 | C |
| R523 | B-7 | C |
| R534 | B-6 | C |
| R568 | A-7 | C |
| R745 | C-8 | C |
| R787 | C-6 | C |
| R788 | C-8 | C |
| R791 | C-6 | C |
| R870 | C-8 | C |
| R871 | C-8 | C |
| R873 | C-8 | C |
| R876 | C-8 | C |
| R878 | C-8 | C |
| Test Point | | |
| TPC1 | C-7 | C |
| TPC2 | C-5 | C |
| TPC3 | A-8 | C |
| TPC4 | A-7 | C |
| TP31 | A-6 | C |
| TP33 | A-7 | C |

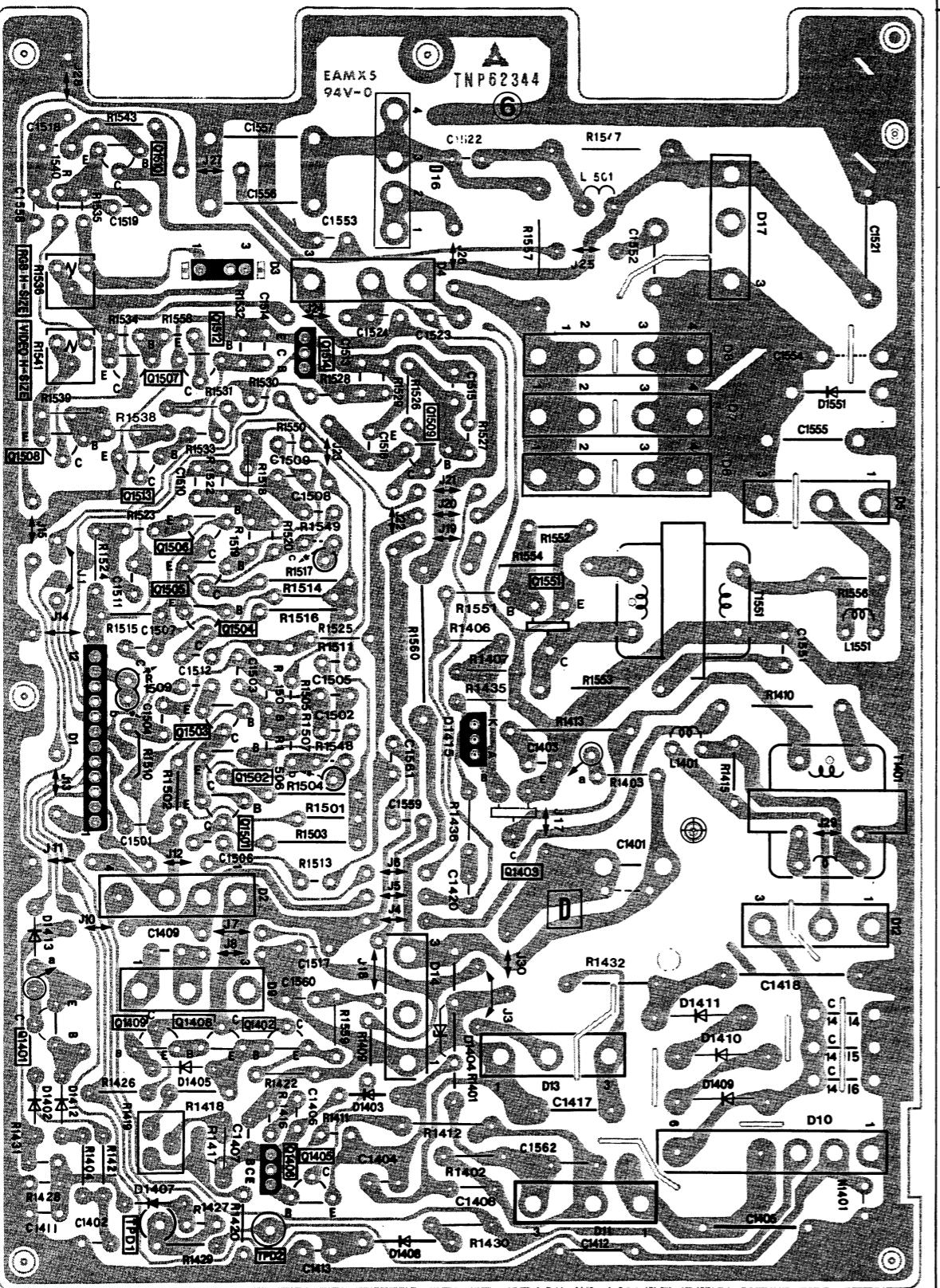
ADDRESS INFORMATION
© ... COMPONENT SIDE
F ... FOIL SIDE

8



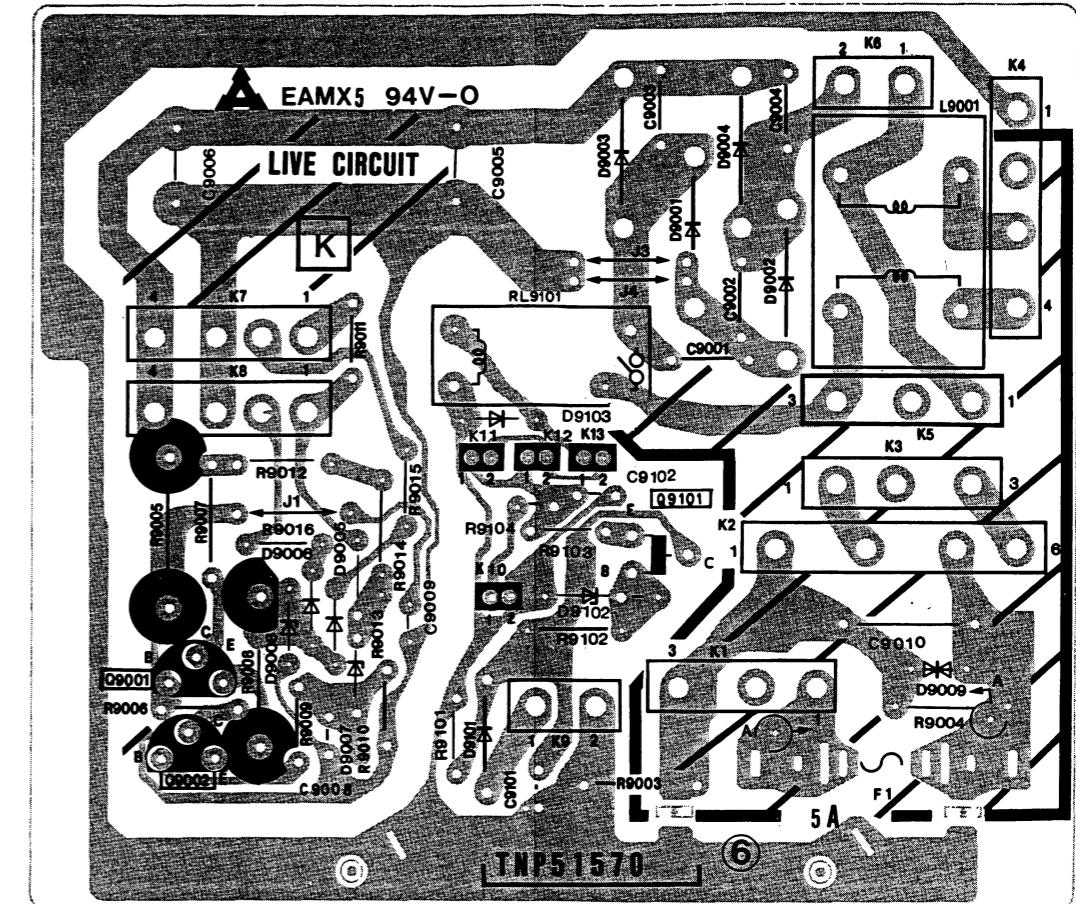
| Test Point | Transistor | I.C. |
|------------|------------|--------|
| | Q1003 | |
| | Q1004 | IC1004 |
| | Q1005 | IC1001 |
| | Q1002 | IC1003 |
| | | IC1002 |
| TPM3 | | |
| TPM5 | TPM2 | Q1001 |
| TPM4 | TPM1 | Q1010 |

D-BOARD TNP62344AZ

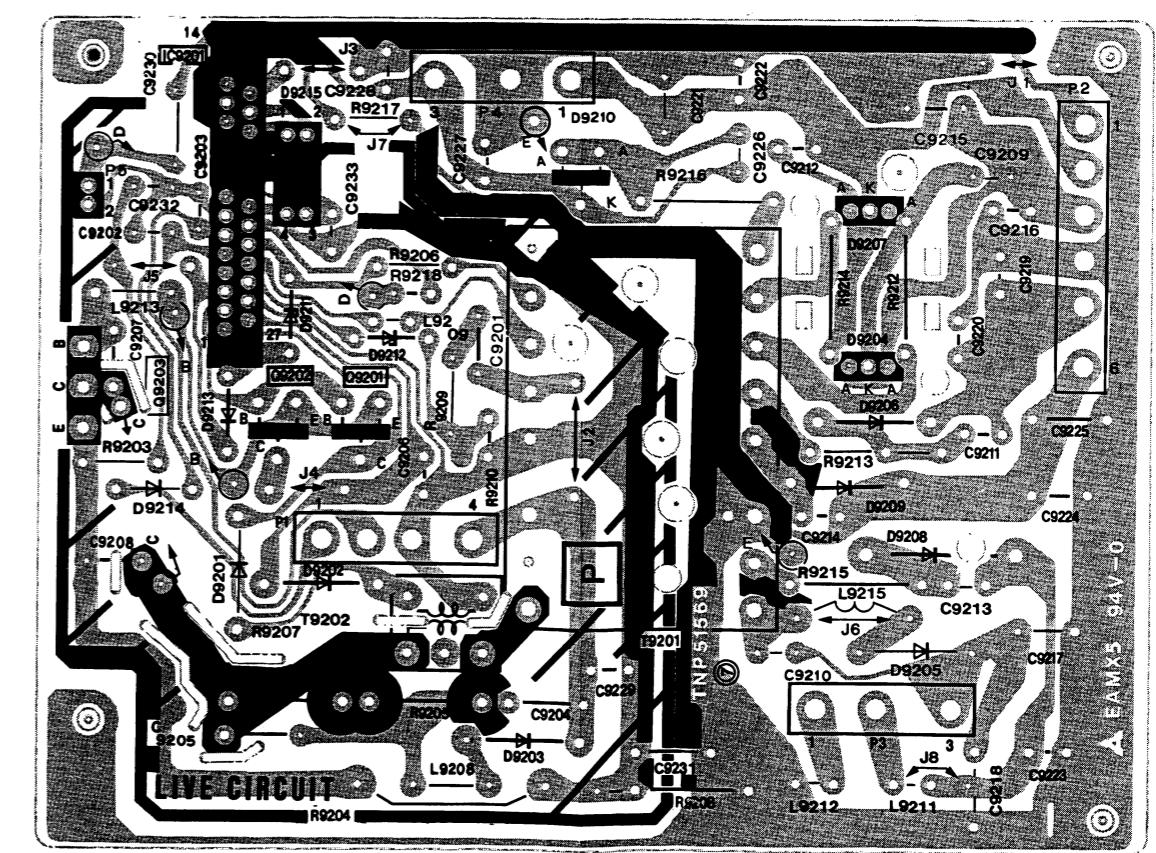


| Test Point | VR | Transistor |
|--------------|-------|----------------------------|
| | | Q1510 |
| | R1536 | |
| R1541 | | Q1512 Q1514 Q1507 |
| | | Q1509 Q1508 |
| | | Q1513 |
| | | Q1506 |
| | | Q1505 Q1551 |
| | | Q1504 |
| | | Q1503 |
| | | Q1502 |
| | | Q1403 Q1501 |
| | | Q1409 Q1402 Q1401 Q1408 |
| | | Q1406 Q1405 |
| TPD1 TPD2 | | |

K-BOARD TNP51570BZ



P-BOARD TNP51569BZ



SCHEMATIC DIAGRAM FOR MODEL PT-102N/GN/AN/SN (CHASSIS NO. Q5)

Important safety notice

Components identified by Δ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

NOTE:

1. RESISTOR

All resistors are carbon 1/4W resistor, unless otherwise noted the following marks.
Unit of resistance is OHM (Ω), ($K = 1,000$, $M = 1,000,000$).

| | |
|---|------------------------------------|
| Δ : Solid | \otimes : Fuse |
| \square : Wire Wound | \bullet : Metal Oxide |
| \textcircled{F} : Non-Flambe | \textcircled{L} : Lead Less Type |
| $\textcircled{\text{O}}$: Fixed Metal Film | |

2. CAPACITOR

All capacitors are ceramic 50V capacitor, unless otherwise noted the following marks.
Unit of capacitance is μF , unless otherwise noted.

| | |
|-------------------------------------|--|
| \textcircled{E} : Electrolytic | $\textcircled{\text{O}}$: Titanium Oxide |
| \textcircled{NP} : Bipolar | \bullet : Temperature Compensation |
| \textcircled{Z} : Z Type | \textcircled{M} : Polyester |
| \textcircled{T} : Dipped Tantalum | $\textcircled{\text{P}}$: Polypropylene |
| \textcircled{TF} : TF Type | $\textcircled{\text{M}}$: Matalized Polyester |

3. COIL

Unit of inductance is μH .

4. TEST POINT

∇ : Test point position

5. VOLTAGE MEASUREMENT

Voltage is measured by a VTVM receiving colour bar signal, when all customer's controls are set to the maximum position.

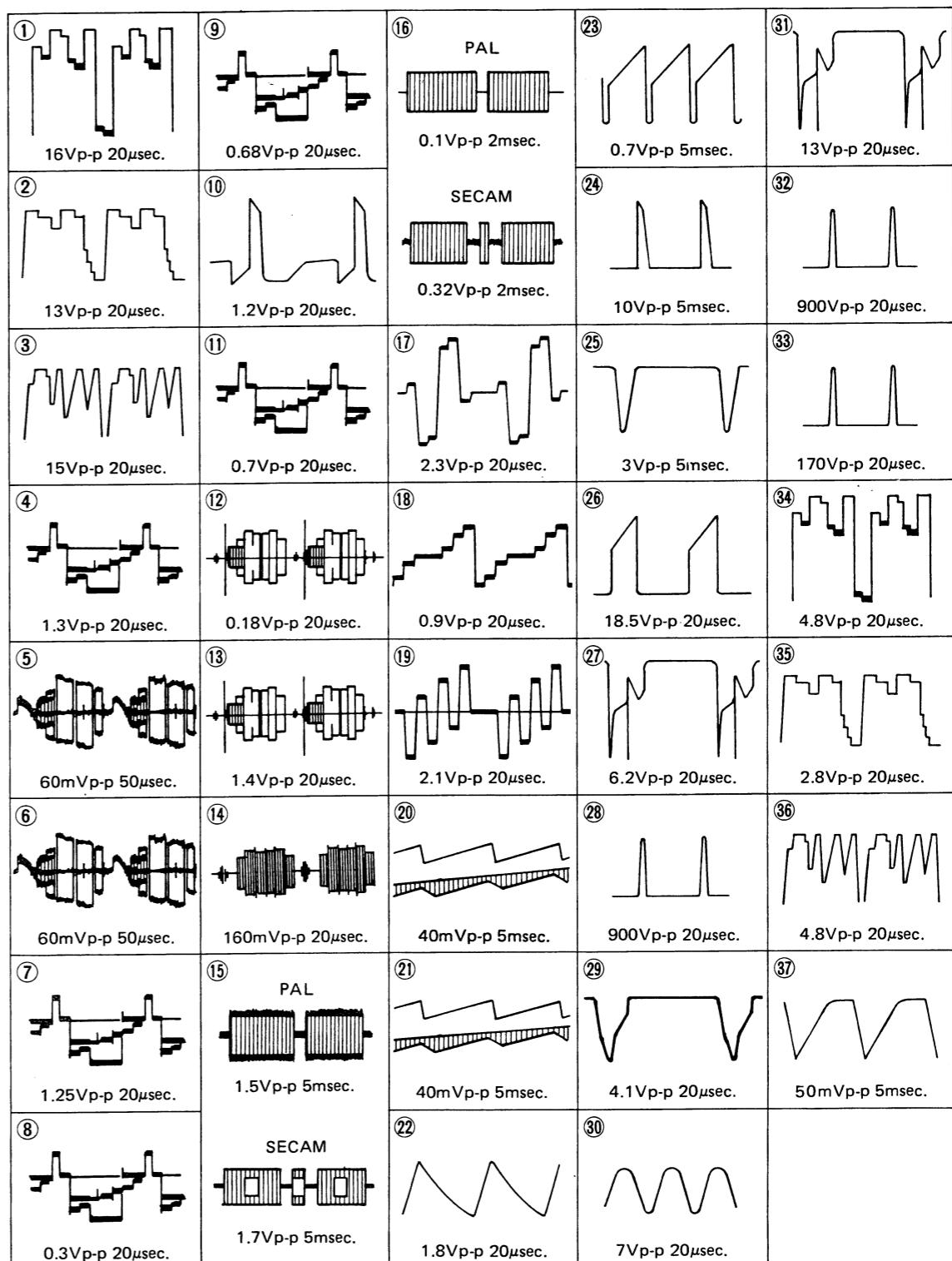
6. When arrow mark (\nearrow) is found, connection is easily found along with the direction of an arrow.

7. When schematic diagram of a board is described in more than two places, they are encircled with dotted line.....

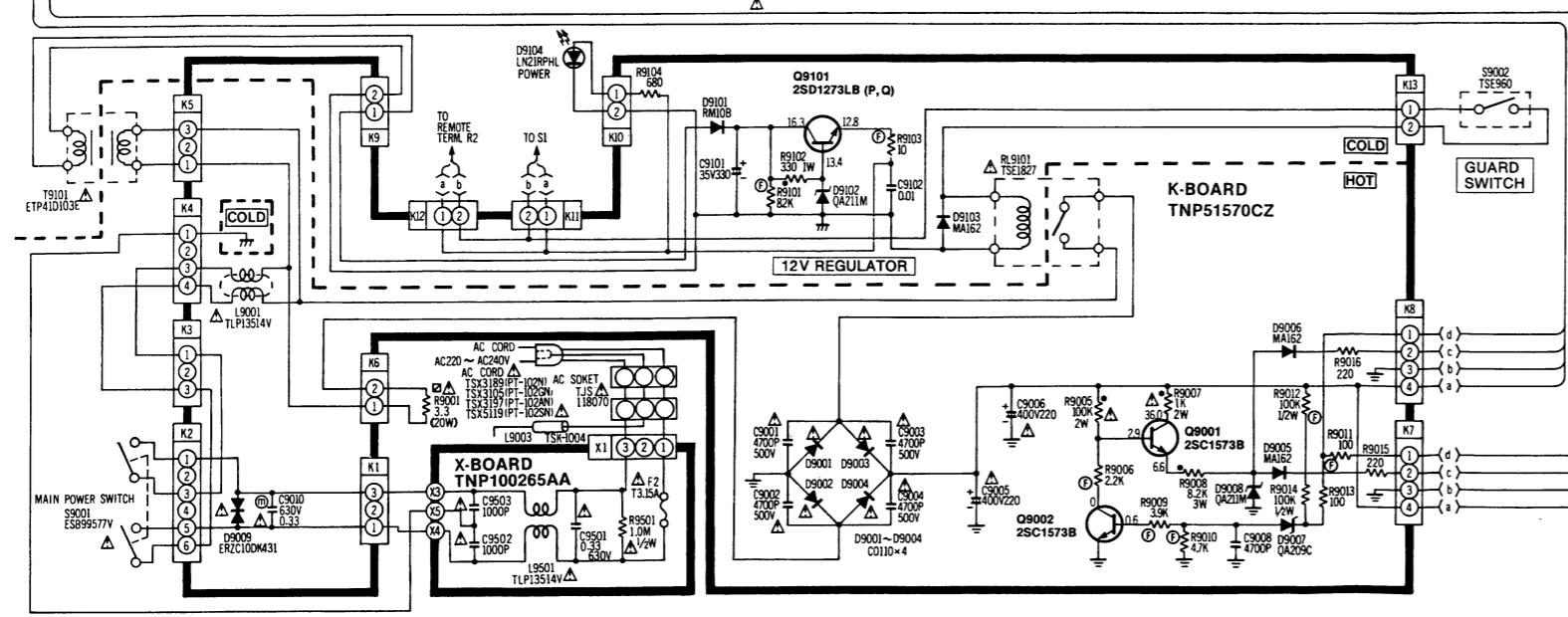
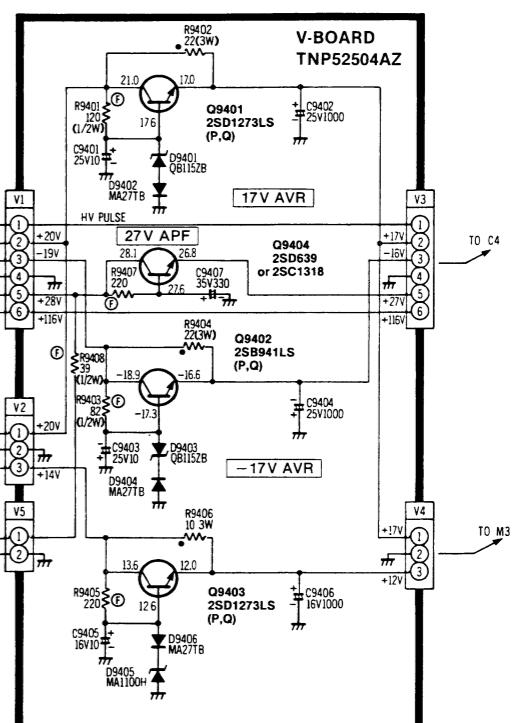
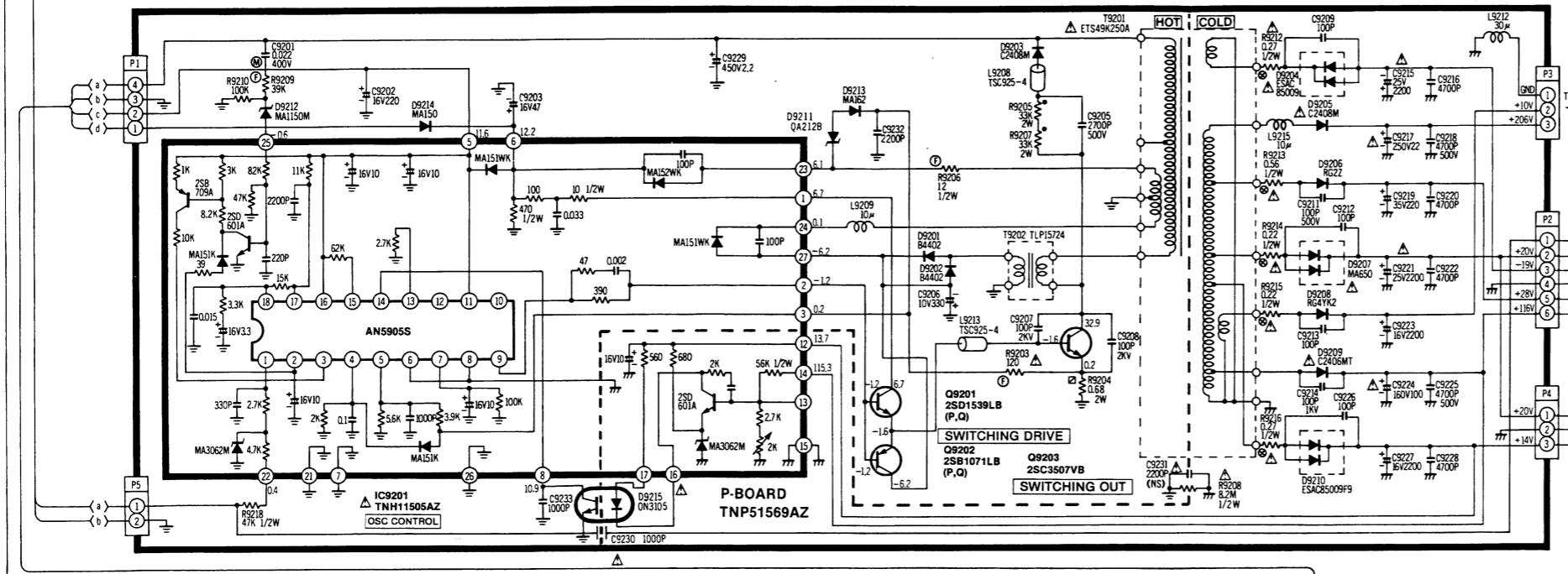
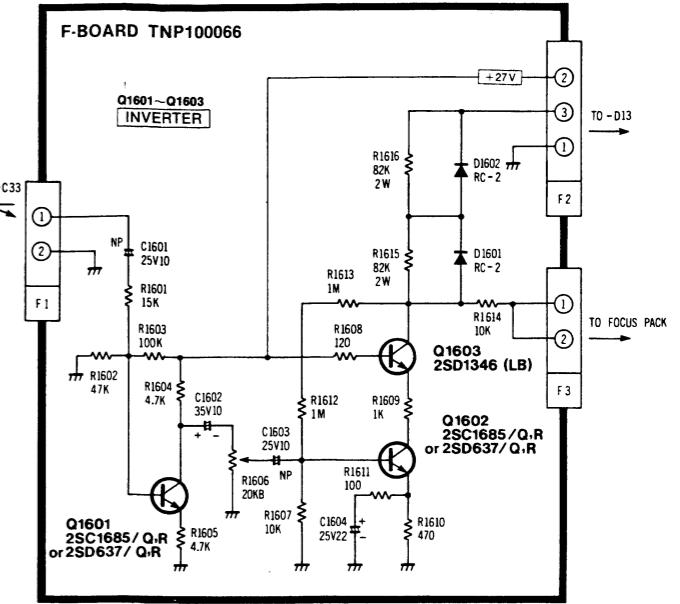
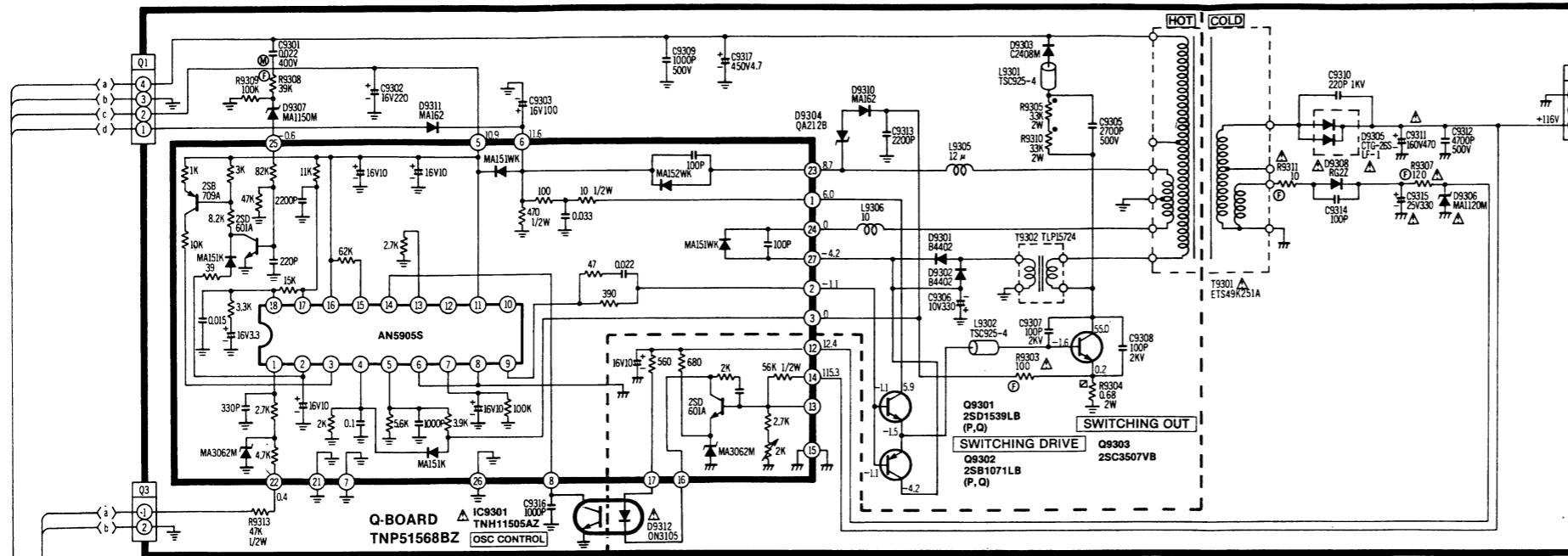
8.  Video Signal
 R, G, B Signal
 H/V, H, V Pulse

9. This schematic diagram is the latest at the time of printing and subject to change without notice.

WAVEFORM PATTERN TABLE

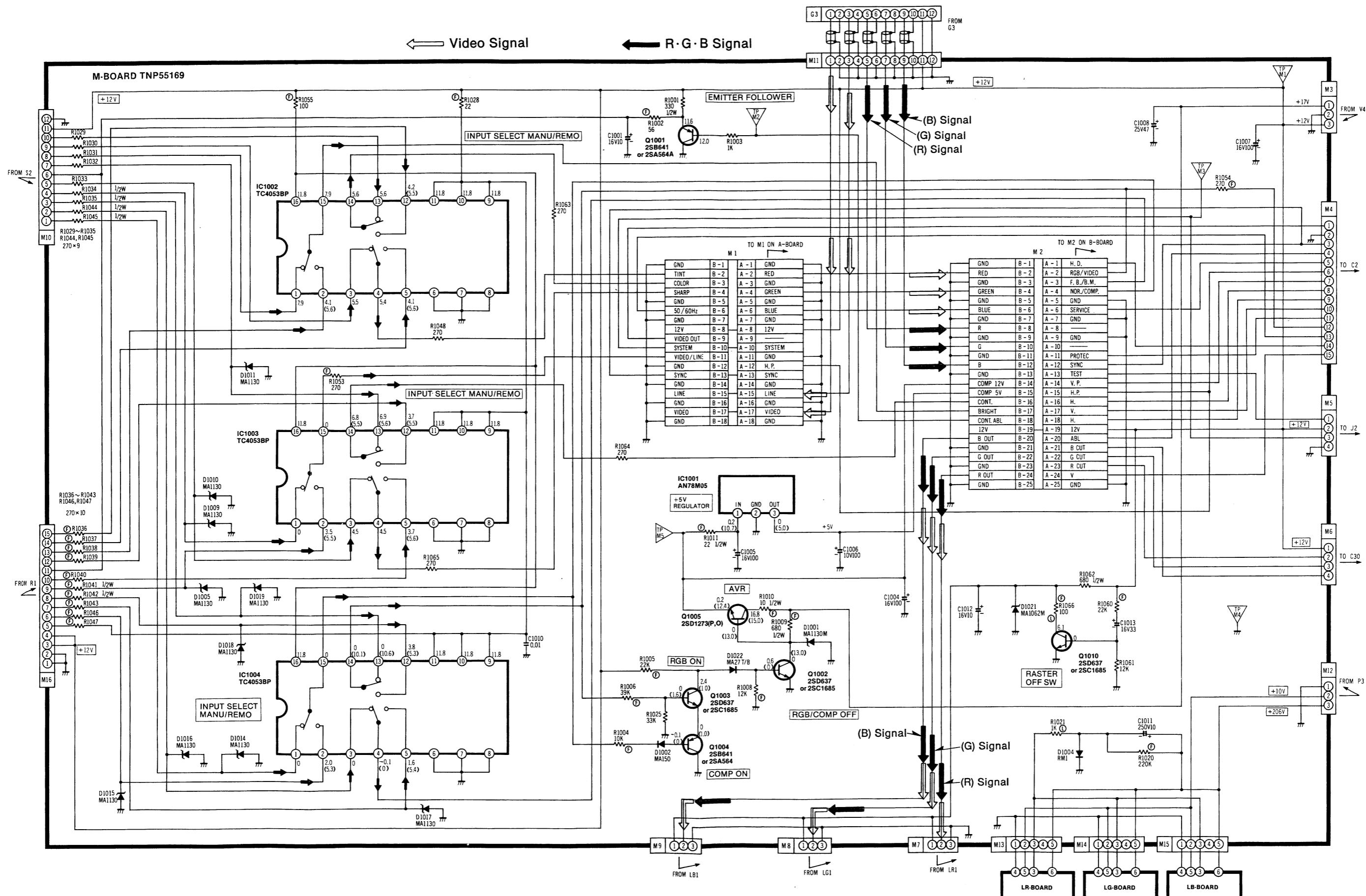


F/K/P/Q/V/X-BOARD Section



PT-102N/GN/AN/SN

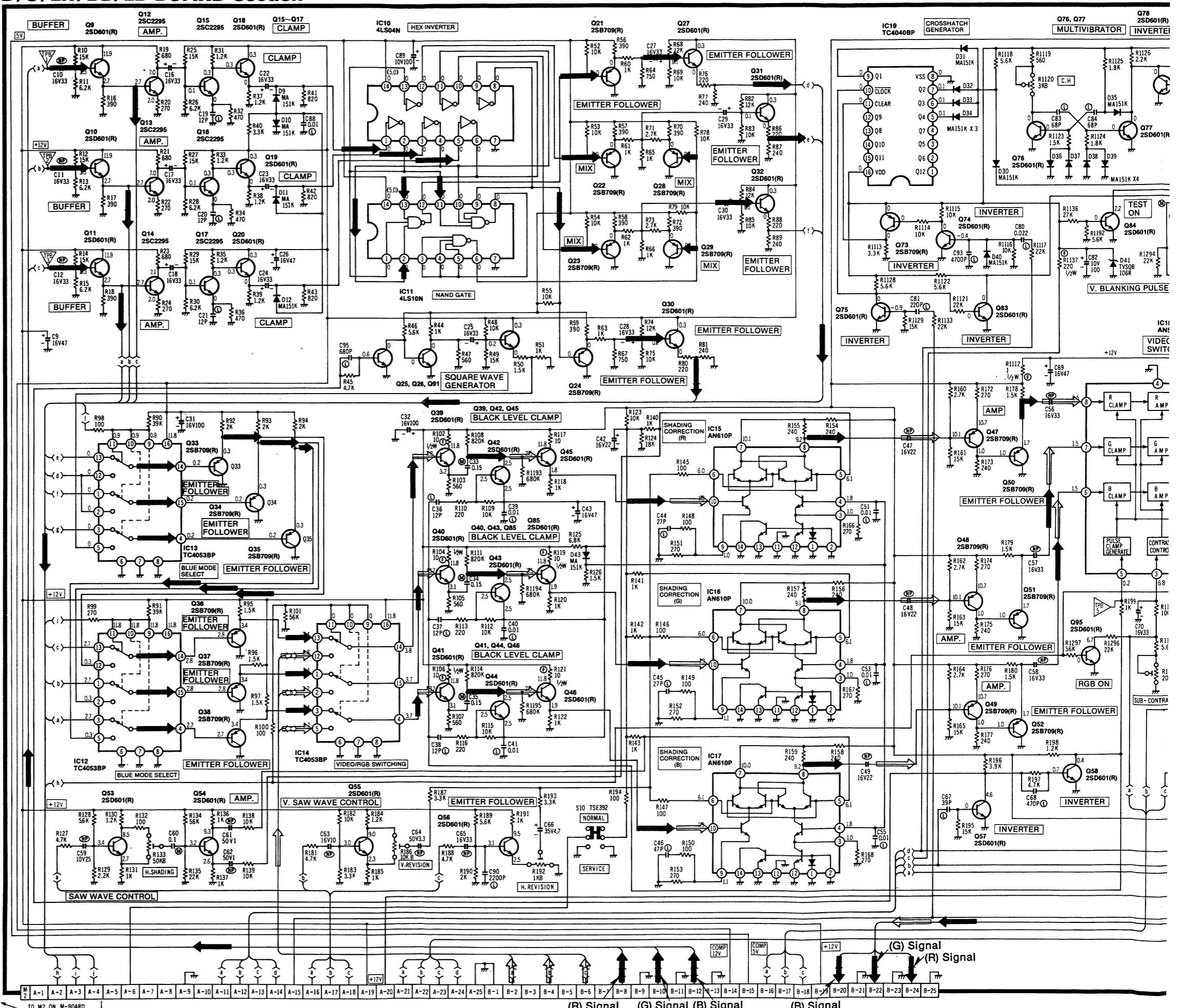
M-BOARD Section

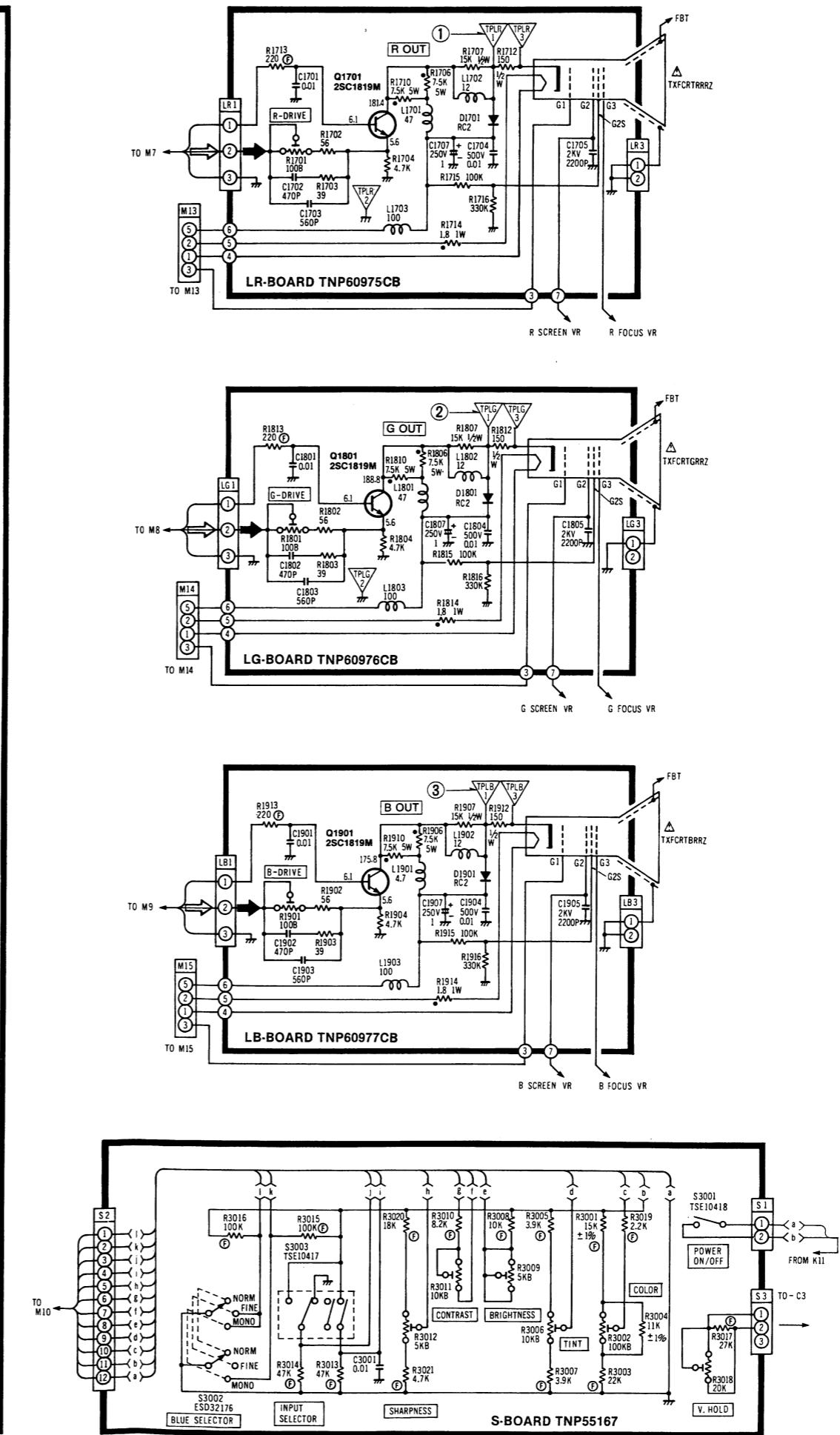
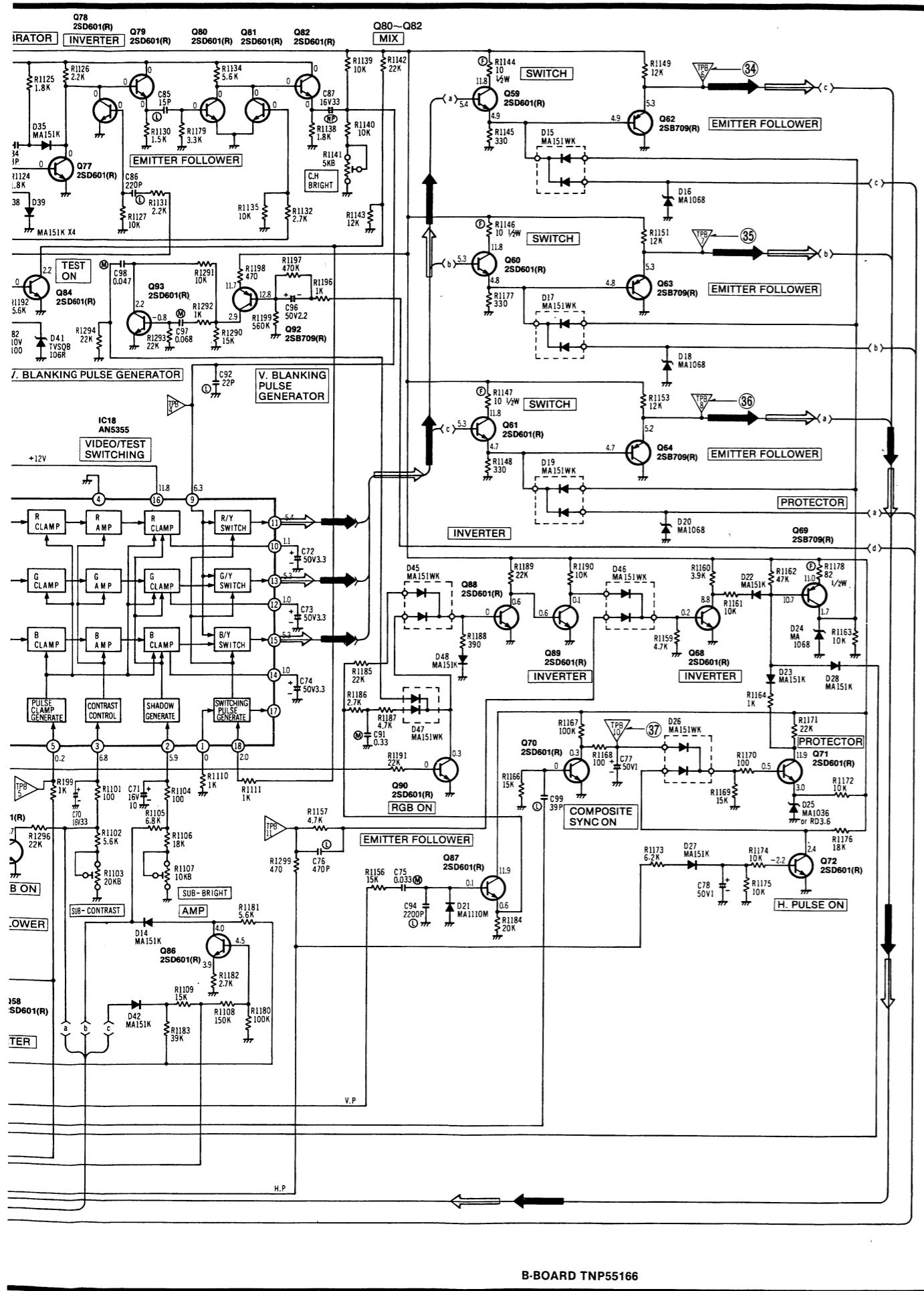


B/S/LR/LG/LB-BOARD Section

← Video Signal

← R·G·B Signal

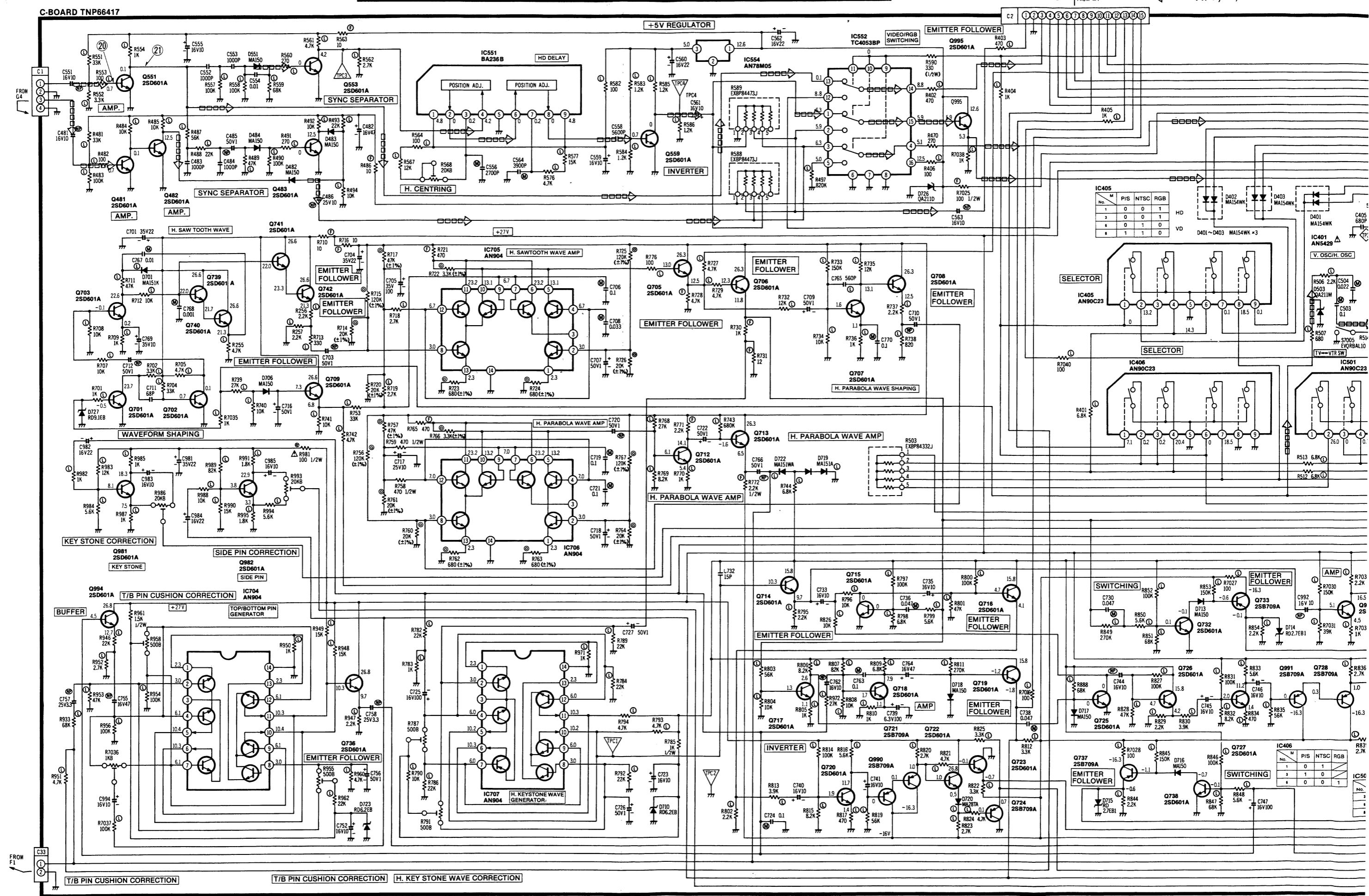




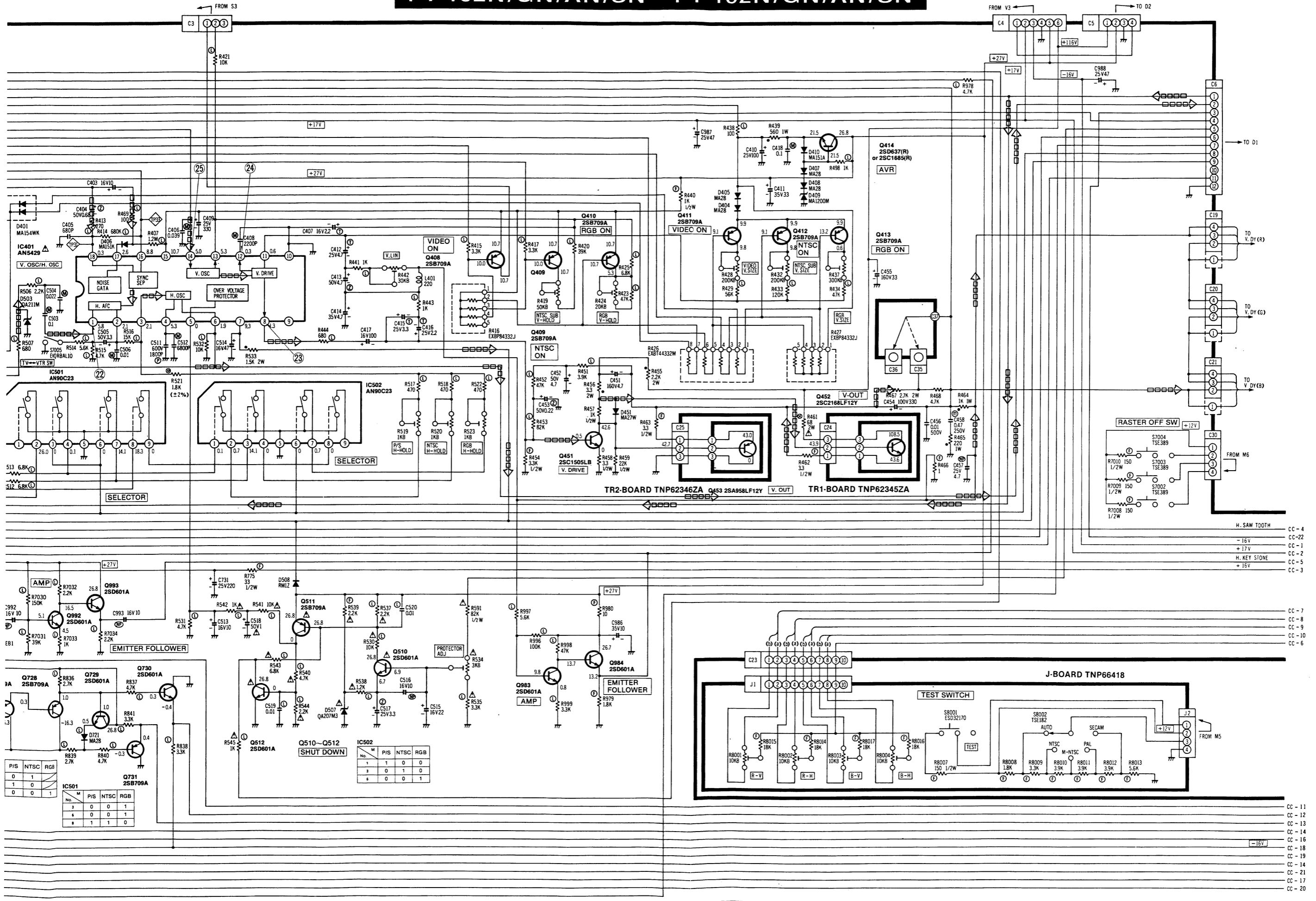
C/J/TR1/TR2-BOARD Section

PT-102N/GN/AN/SN **PT-102N/GN/AN/SN**

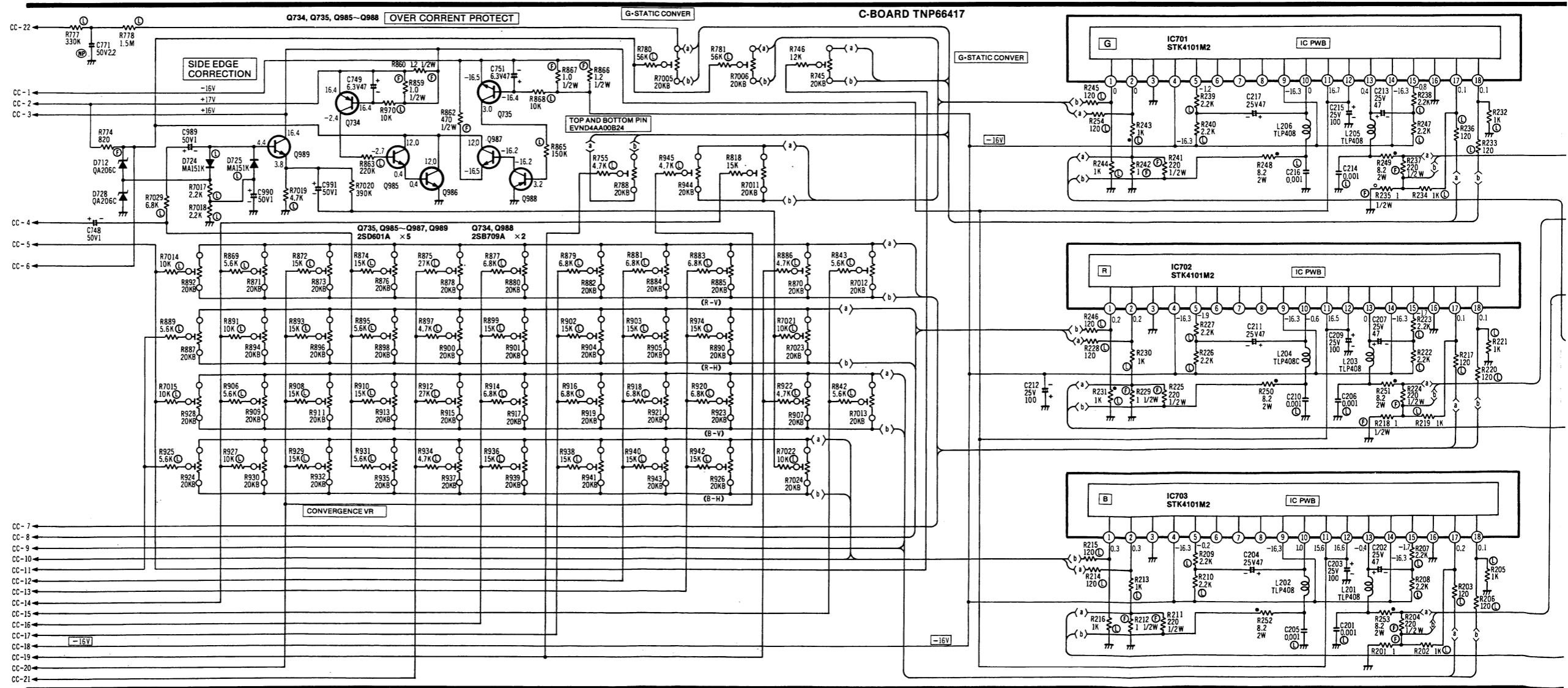
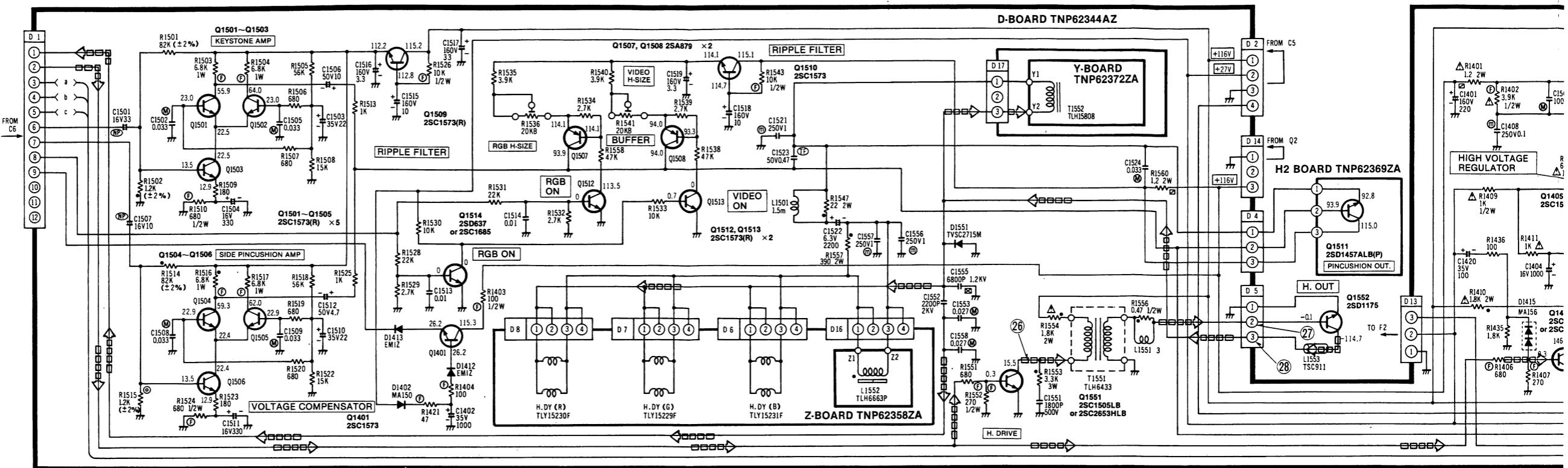
◀ H/V, H, V Pulse

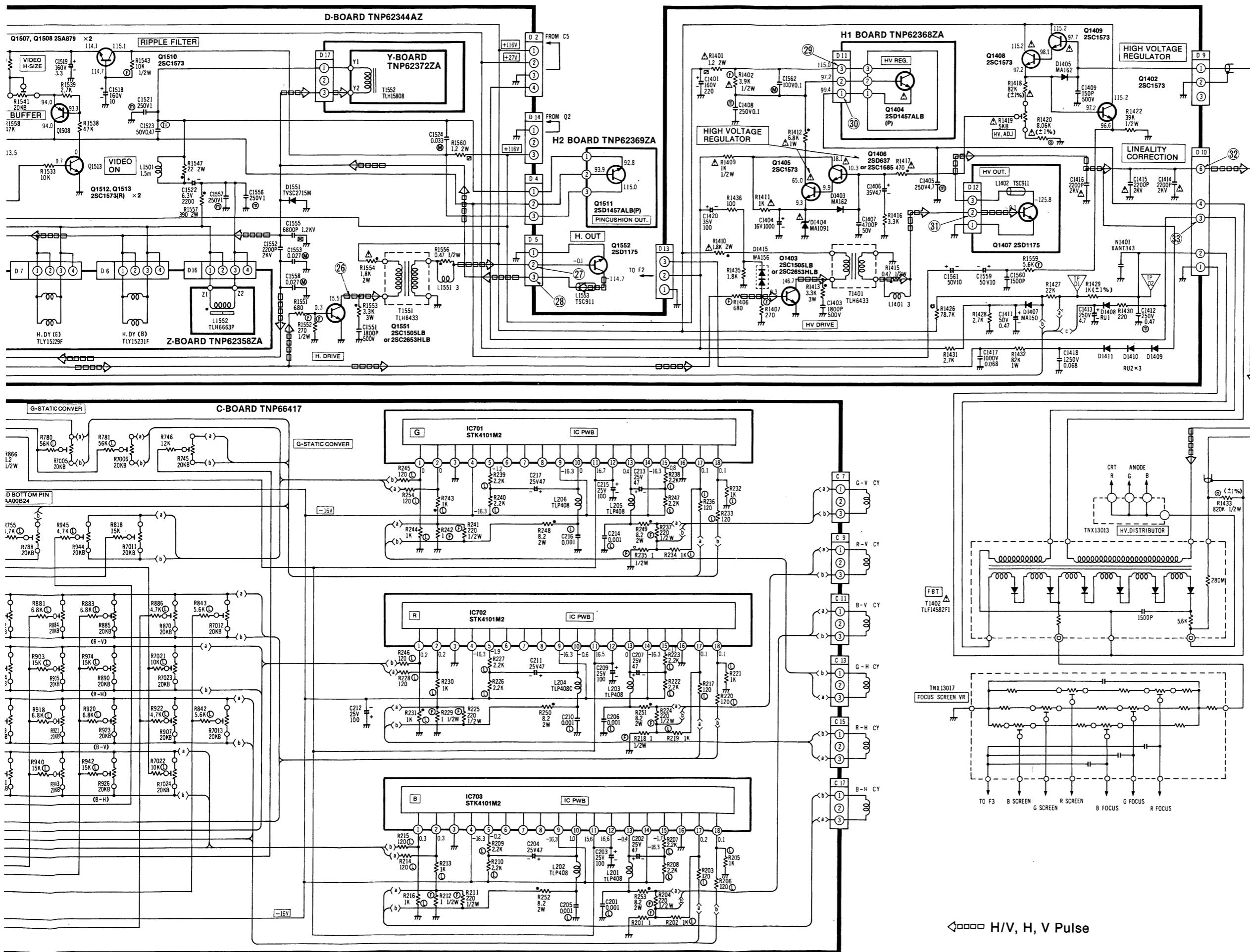


PT-102N/GN/AN/SN PT-102N/GN/AN/SN

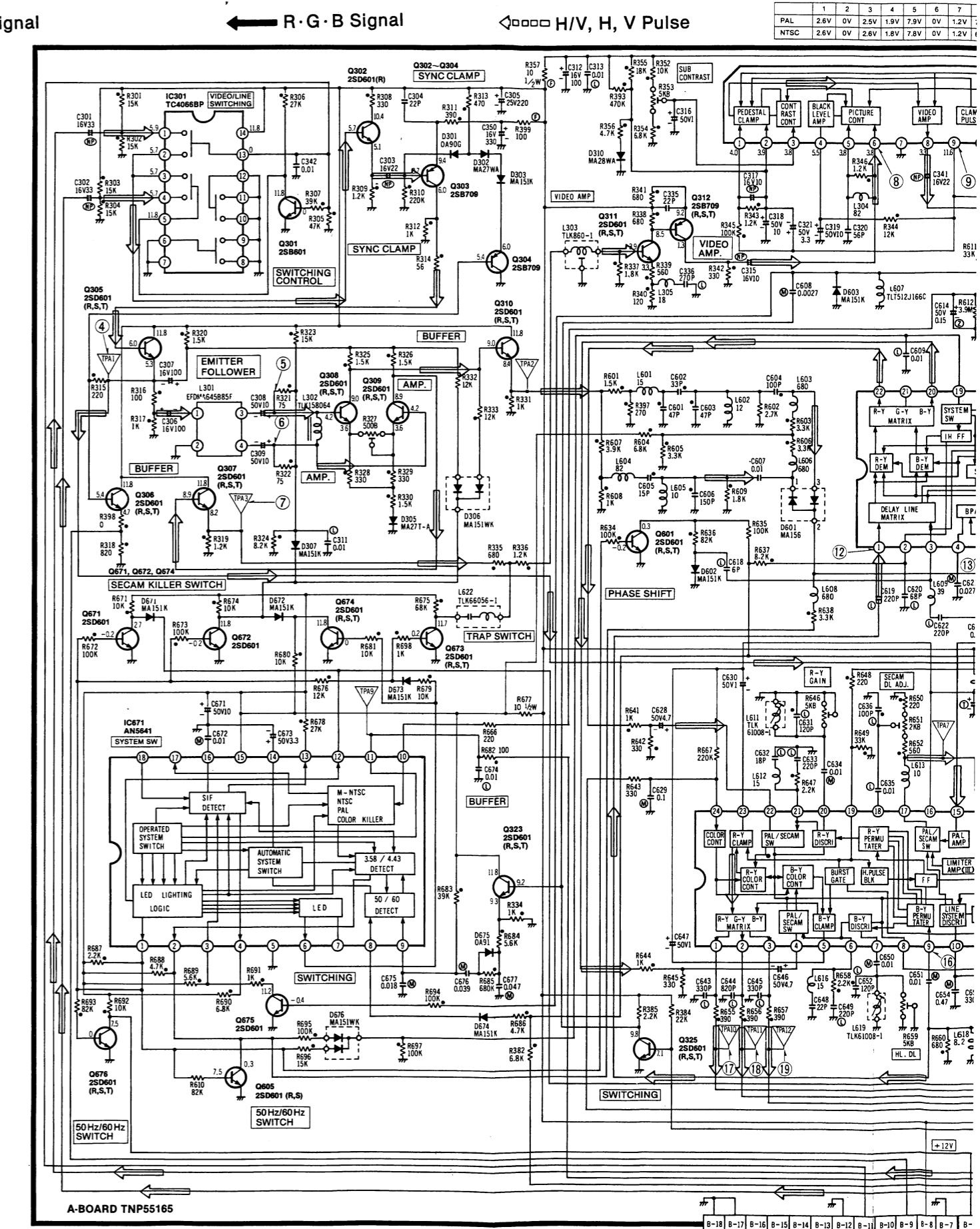
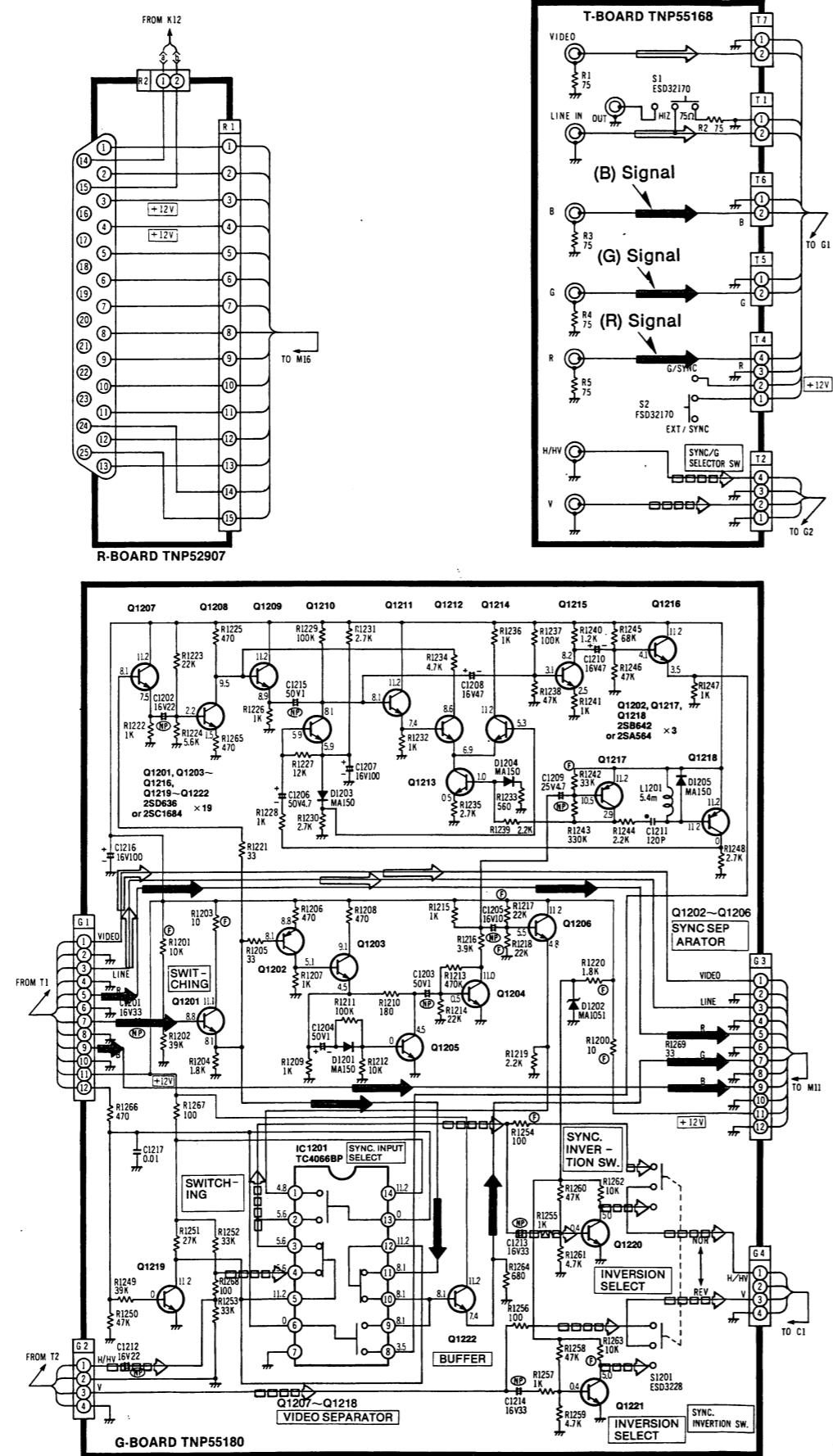


C/D/Y/Z/H1/H2-BOARD Section





A/G/R/T-BOARD Section



PT-102N/GN/AN/SN PT-102N/GN/AN/SN

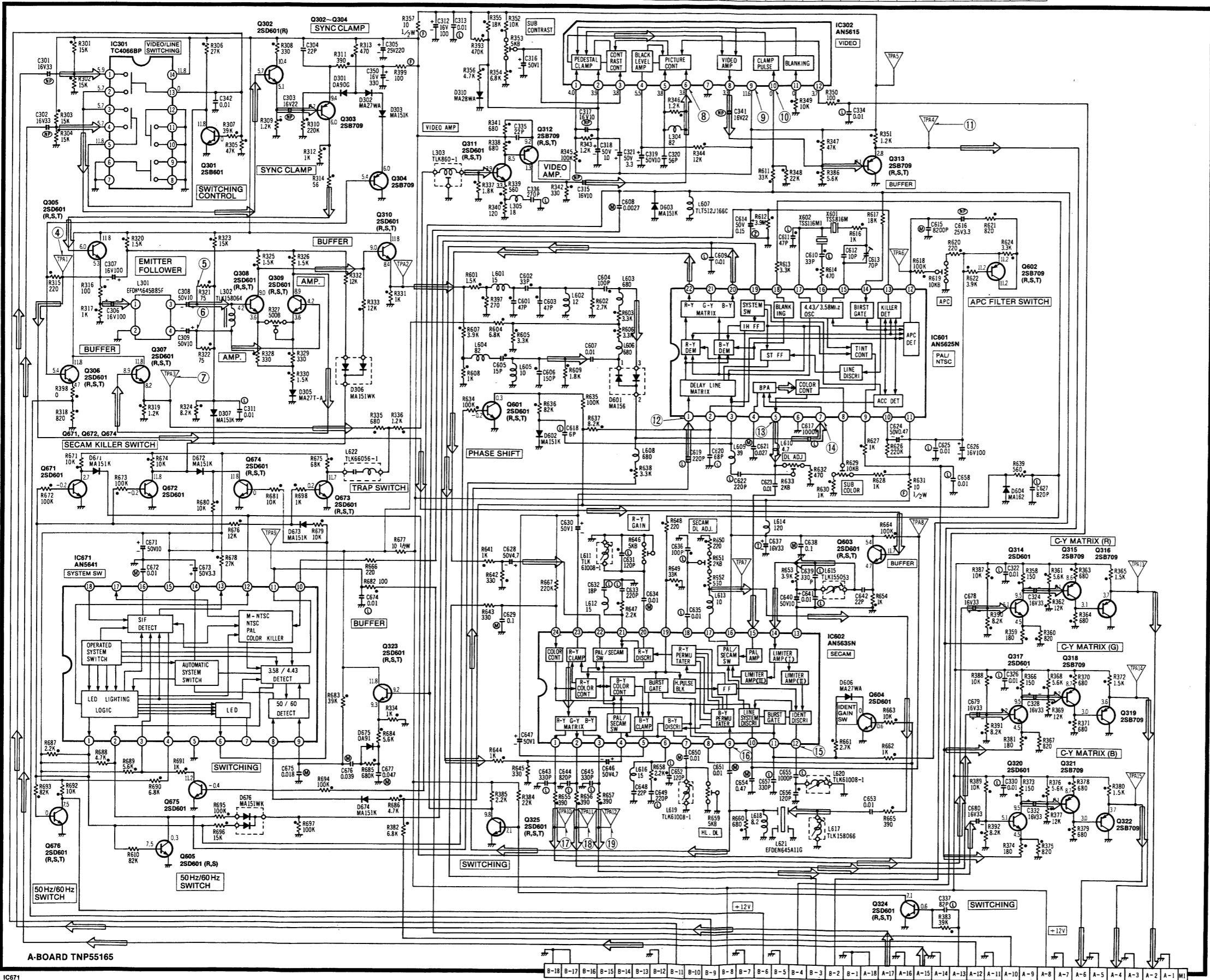
Video Signal

← R·G·B Signal

↔ H/V, H, V Pulse

IC601

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|-------|------|------|-------|-------|------|------|-------|------|-------|------|-------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| PAL | 2.6V | 0V | 2.5V | 1.9V | 7.3V | 0V | 1.2V | 7.0V | 6.4V | 8.6V | 11.2V | 7.8V | 9.4V | 0V | 11.2V | 7.6V | 3.1V | 0V | 6.1V | 5.2V | 7.0V | 6.4V |
| NTSC | 2.6V | 0V | 2.6V | 1.8V | 7.3V | 0V | 1.2V | 6.9V | 6.4V | 8.6V | 11.2V | 7.9V | 9.4V | -0.1V | 9.2V | 11.2V | 3.1V | 0V | 3.6V | 6.4V | 6.7V | 6.2V |
| SECAM | 7.6V | 0.3V | 11.6V | 11.8V | 0V | 0.2V | 11.7V | 0.2V | 11.9V | 7.4V | 11.2V | 0.1V | 11.8V | 6.6V | 11.8V | 5.1V | 2.7V | 3.3V | | | | |



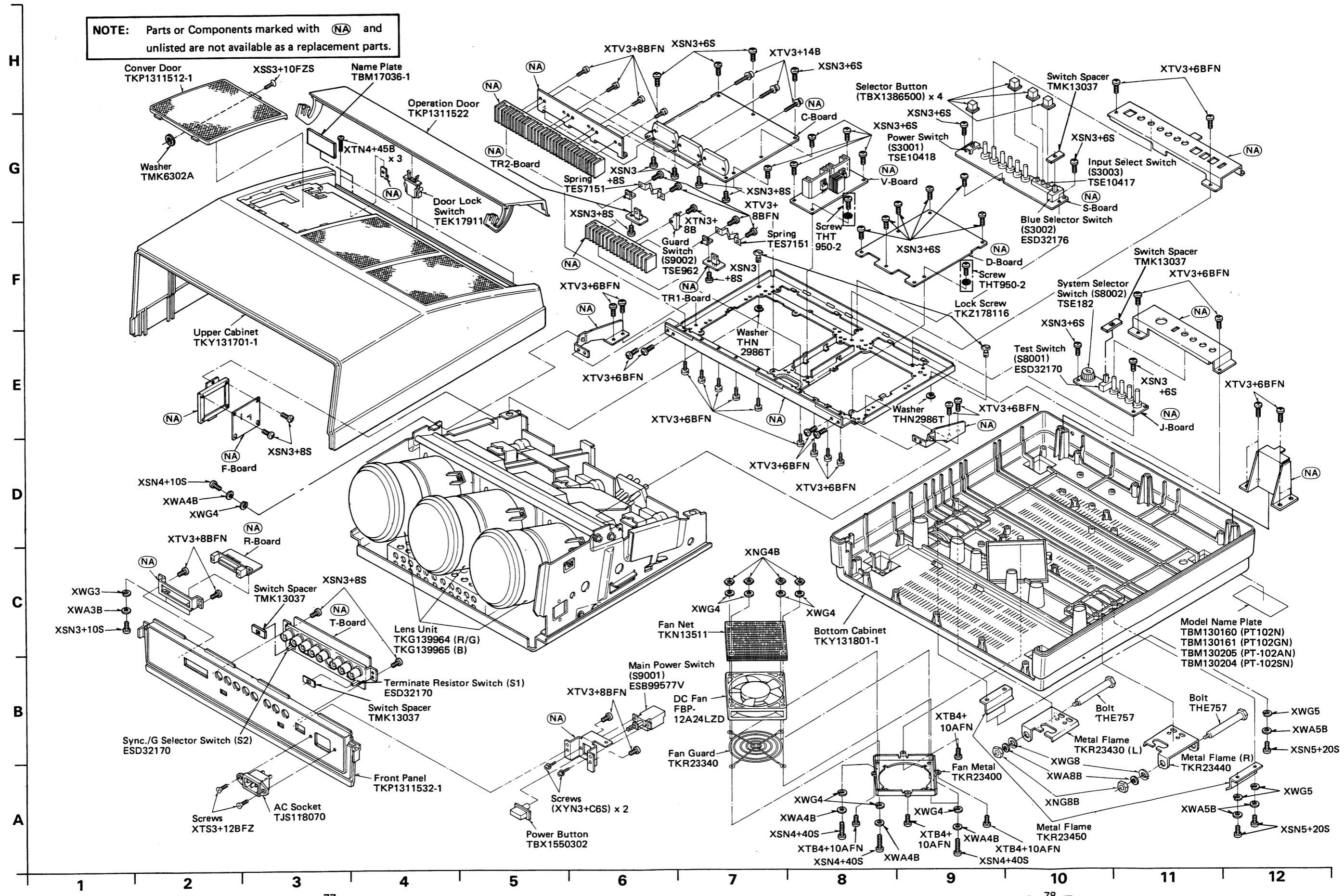
IC671

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|-------|------|------|-------|-------|----|------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|
| SECAM | 7.6V | 0.3V | 11.6V | 11.8V | 0V | 0.2V | 11.7V | 0.2V | 11.9V | 7.4V | 11.2V | 0.1V | 11.8V | 6.6V | 11.8V | 5.1V | 2.7V | 3.3V |
| PAL | 7.6V | 0.3V | 11.6V | 11.8V | 0V | 0.2V | 0V | 0.2V | 11.9V | 9.4V | 11.2V | 1.0V | 11.8V | 6.6V | 11.8V | 5.1V | 0V | 3.3V |
| NTSC | 0.2V | 9.1V | 11.6V | 11.8V | 0V | 0V | 1.2V | 0.2V | 11.9V | 9.4V | 11.2V | 1.5V | 11.8V | 6.6V | 11.8V | 5.1V | 0V | 3.3V |

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|-------|------|------|------|------|-------|------|------|------|------|------|----|------|------|-------|------|-------|------|------|------|------|-------|------|-------|------|
| SECAM | 6.7V | 6.9V | 7.1V | 4.8V | 10.2V | 4.8V | 3.2V | 0.1V | 3.2V | 3.3V | 0V | 2.3V | 3.2V | 11.7V | 7.4V | 3.0V | 0.3V | 3.2V | 4.8V | 4.9V | 10.1V | 5.1V | | |
| PAL | 7.0V | 7.0V | 6.4V | 4.8V | 10.2V | 4.7V | 3.2V | 1.1V | 2.5V | 7.5V | 0V | 3.3V | 0V | 2.3V | 3.2V | 11.7V | 7.2V | 2.4V | 0.3V | 3.2V | 4.9V | 4.9V | 10.1V | 5.1V |

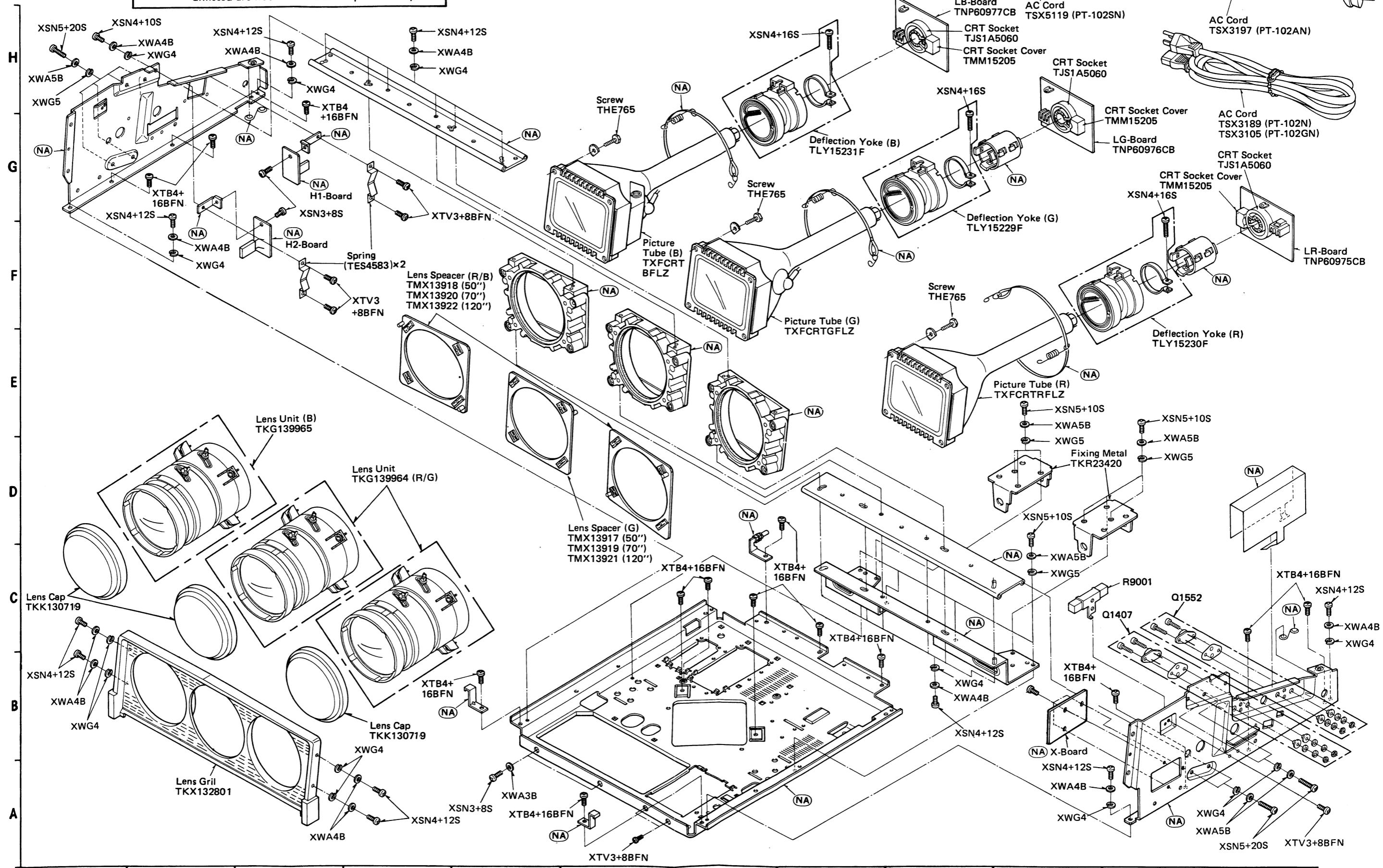
EXPLODED VIEWS

NOTE: Parts or Components marked with **(NA)** and unlisted are not available as a replacement part.

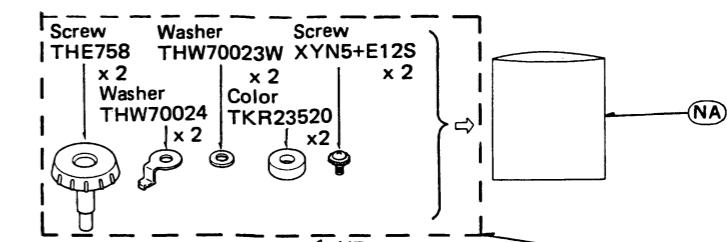
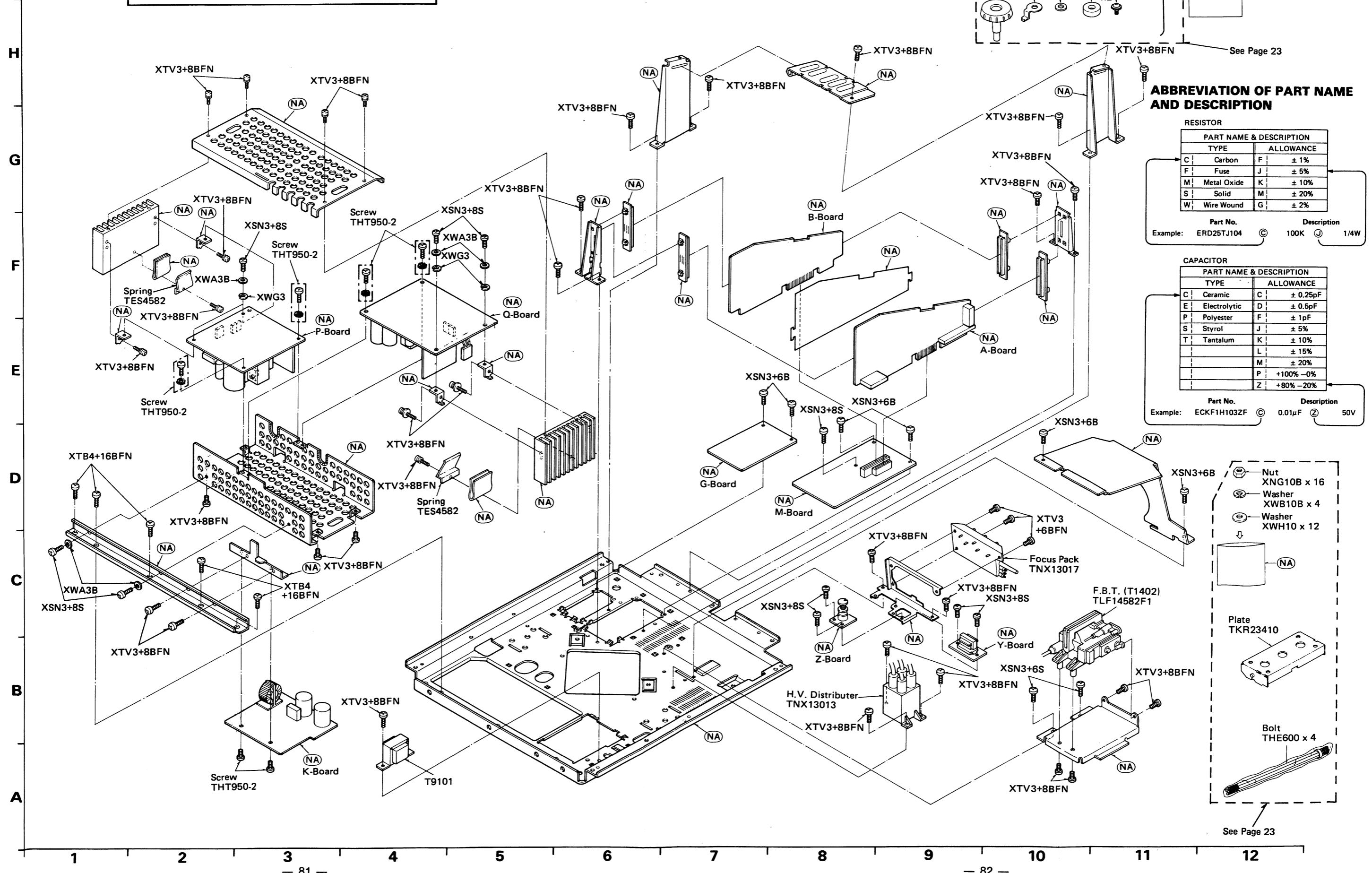


PT-102N/GN/AN/SN

NOTE: Parts or Components marked with **(NA)** and unlisted are not available as a replacement parts.



NOTE: Parts or Components marked with (NA) and unlisted are not available as a replacement parts.



ABBREVIATION OF PART NAME AND DESCRIPTION

RESISTOR

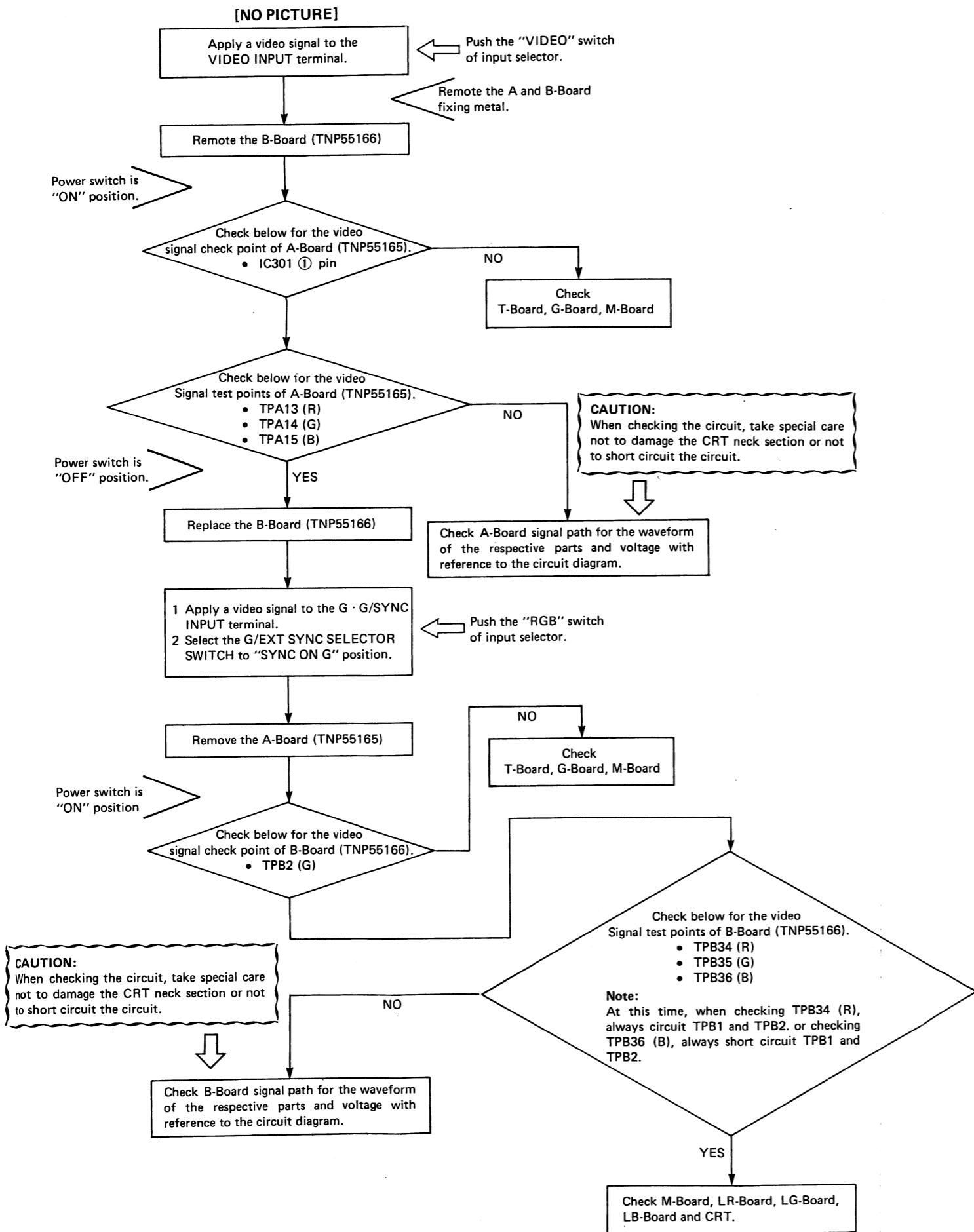
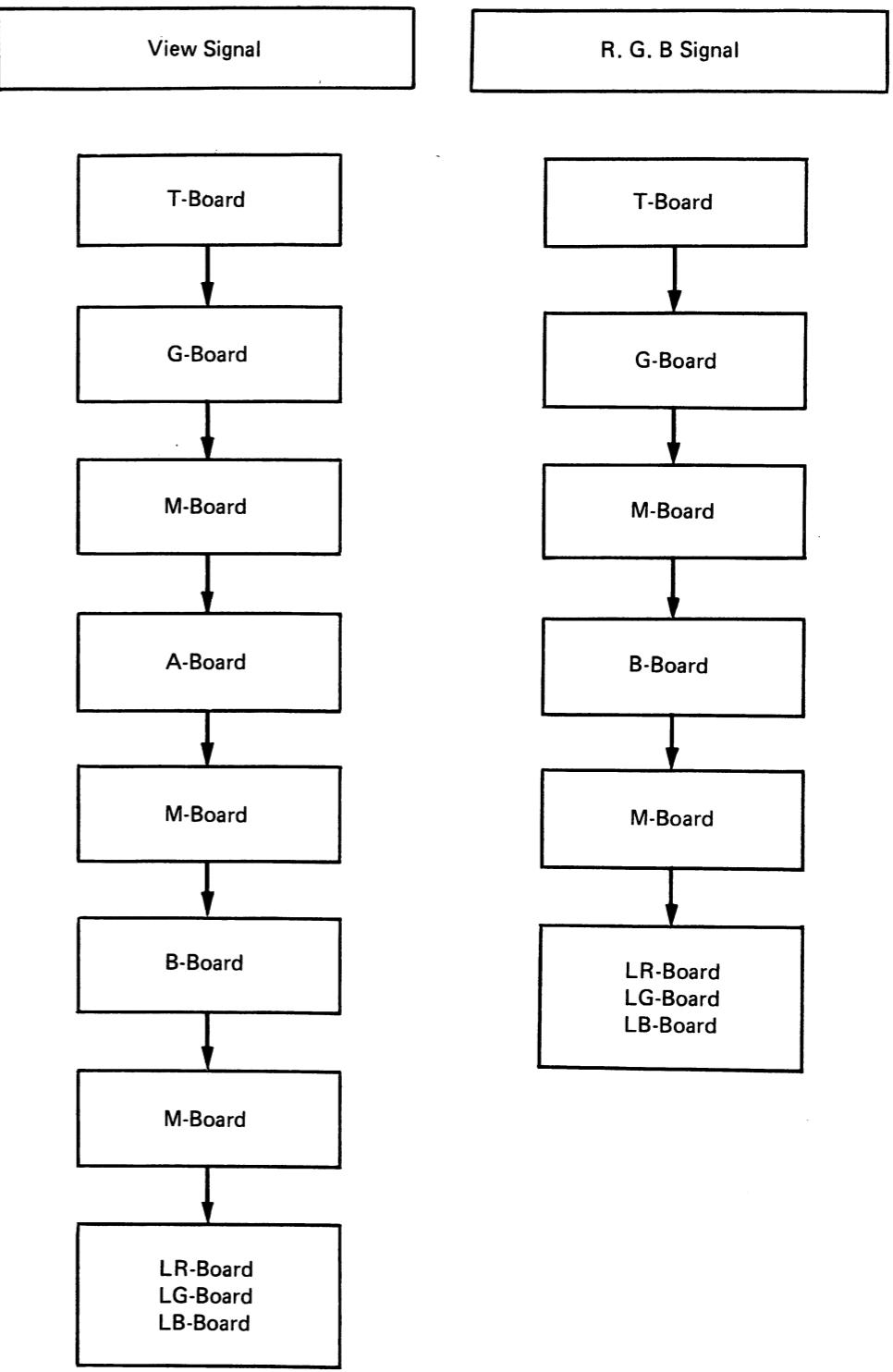
| PART NAME & DESCRIPTION | | |
|-------------------------|-----------|-------|
| TYPE | ALLOWANCE | |
| C Carbon | F | ± 1% |
| F Fuse | J | ± 5% |
| M Metal Oxide | K | ± 10% |
| S Solid | M | ± 20% |
| W Wire Wound | G | ± 2% |

Part No. ERD25TJ104 Description Example: 100K C 1/4W

CAPACITOR

| PART NAME & DESCRIPTION | | |
|-------------------------|-----------|-----------|
| TYPE | ALLOWANCE | |
| C Ceramic | C | ± 0.25pF |
| E Electrolytic | D | ± 0.5pF |
| P Polyester | F | ± 1pF |
| S Styrol | J | ± 5% |
| T Tantalum | K | ± 10% |
| | L | ± 15% |
| | M | ± 20% |
| | P | +100% -0% |
| | Z | +80% -20% |

Part No. ECKF1H103ZF Description Example: 0.01μF Z 50V

TROUBLESHOOTING**Signal Road**

REPLACEMENT PARTS LIST**Important safety notice**Components identified by **Δ** mark have special characteristics important for safety.

When replacing any of these components, use only manufacturer's specified parts.

Note: All the printed circuit boards except LR-Board, LG-Board and LB-Board are not available as a complete printed circuit board.

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|------------------|-------------|--------------------|----------|-------------|--------------------|
| RESISTORS | | | | | |
| R1 | ERD25FJ750 | C 750HM, J, 1/4W | R47 | ERJ8GCYJ561 | M 5600HM, J, 1/8W |
| R2 | ERD25FJ750 | C 750HM, J, 1/4W | R48 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W |
| R3 | ERD25FJ750 | C 750HM, J, 1/4W | R49 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W |
| R4 | ERD25FJ750 | C 750HM, J, 1/4W | R50 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W |
| R5 | ERD25FJ750 | C 750HM, J, 1/4W | R51 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R10 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W | R52 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W |
| R11 | ERJ8GCYJ622 | M 6.2KOHM, J, 1/8W | R53 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W |
| R12 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W | R54 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W |
| R13 | ERJ8GCYJ622 | M 6.2KOHM, J, 1/8W | R55 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W |
| R14 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W | R56 | ERJ8GCYJ391 | M 3900HM, J, 1/8W |
| R15 | ERJ8GCYJ622 | M 6.2KOHM, J, 1/8W | R57 | ERJ8GCYJ391 | M 3900HM, J, 1/8W |
| R16 | ERJ8GCYJ391 | M 3900HM, J, 1/8W | R58 | ERJ8GCYJ391 | M 3900HM, J, 1/8W |
| R17 | ERJ8GCYJ391 | M 3900HM, J, 1/8W | R59 | ERJ8GCYJ391 | M 3900HM, J, 1/8W |
| R18 | ERJ8GCYJ391 | M 3900HM, J, 1/8W | R60 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R19 | ERJ8GCYJ681 | M 6800HM, J, 1/8W | R61 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R20 | ERJ8GCYJ271 | M 2700HM, J, 1/8W | R62 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R21 | ERJ8GCYJ681 | M 6800HM, J, 1/8W | R63 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R22 | ERJ8GCYJ271 | M 2700HM, J, 1/8W | R64 | ERJ8GCYJ751 | M 7500HM, J, 1/8W |
| R23 | ERJ8GCYJ681 | M 6800HM, J, 1/8W | R65 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R24 | ERJ8GCYJ271 | M 2700HM, J, 1/8W | R66 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R25 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W | R67 | ERJ8GCYJ751 | M 7500HM, J, 1/8W |
| R26 | ERJ8GCYJ622 | M 6.2KOHM, J, 1/8W | R68 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W |
| R27 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W | R69 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R28 | ERJ8GCYJ622 | M 6.2KOHM, J, 1/8W | R70 | ERJ8GCYJ391 | M 3900HM, J, 1/8W |
| R29 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W | R71 | ERJ8GCYJ272 | M 2.7KOHM, J, 1/8W |
| R30 | ERJ8GCYJ622 | M 6.2KOHM, J, 1/8W | R72 | ERJ8GCYJ391 | M 3900HM, J, 1/8W |
| R31 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R73 | ERJ8GCYJ272 | M 2.7KOHM, J, 1/8W |
| R32 | ERJ8GCYJ471 | M 4700HM, J, 1/8W | R74 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W |
| R33 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R75 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R34 | ERJ8GCYJ471 | M 4700HM, J, 1/8W | R76 | ERJ8GCYJ221 | M 2200HM, J, 1/8W |
| R35 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R77 | ERJ8GCYJ241 | M 2400HM, J, 1/8W |
| R36 | ERJ8GCYJ471 | M 4700HM, J, 1/8W | R78 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R37 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R79 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R38 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R80 | ERJ8GCYJ221 | M 2200HM, J, 1/8W |
| R39 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R81 | ERJ8GCYJ241 | M 2400HM, J, 1/8W |
| R40 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W | R82 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W |
| R41 | ERJ8GCYJ821 | M 8200HM, J, 1/8W | R83 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R42 | ERJ8GCYJ821 | M 8200HM, J, 1/8W | R84 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W |
| R43 | ERJ8GCYJ821 | M 8200HM, J, 1/8W | R85 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R44 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R86 | ERJ8GCYJ221 | M 2200HM, J, 1/8W |
| R45 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W | R87 | ERJ8GCYJ241 | M 2400HM, J, 1/8W |
| R46 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W | R88 | ERJ8GCYJ221 | M 2200HM, J, 1/8W |
| | | | R89 | ERJ8GCYJ241 | M 2400HM, J, 1/8W |
| | | | R90 | ERJ8GCYJ393 | M 39KOHM, J, 1/8W |

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| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|--------------------|----------|--------------|----------------------|
| R91 | ERJ8GCYJ393 | M 39KOHM, J, 1/8W | R140 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R92 | ERJ8GCYJ202 | M 2KOHM, J, 1/8W | R141 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R93 | ERJ8GCYJ202 | M 2KOHM, J, 1/8W | R142 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R94 | ERJ8GCYJ202 | M 2KOHM, J, 1/8W | R143 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R95 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W | R145 | ERJ8GCYJ101 | M 100OHM, J, 1/8W |
| R96 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W | R146 | ERJ8GCYJ101 | M 100OHM, J, 1/8W |
| R97 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W | R147 | ERJ8GCYJ101 | M 100OHM, J, 1/8W |
| R98 | ERJ8GCYJ101 | M 1000HM, J, 1/8W | R148 | ERJ8GCYJ101 | M 1000HM, J, 1/8W |
| R99 | ERJ8GCYJ271 | M 2700HM, J, 1/8W | R149 | ERJ8GCYJ101 | M 1000HM, J, 1/8W |
| R100 | ERJ8GCYJ101 | M 1000HM, J, 1/8W | R150 | ERJ8GCYJ101 | M 1000HM, J, 1/8W |
| R101 | ERJ8GCYJ563 | M 56KOHM, J, 1/8W | R151 | ERJ8GCYJ271 | M 2700HM, J, 1/8W |
| R102 | ERDS1FJ100 | C 100HM, J, 1/2W | R152 | ERJ8GCYJ271 | M 2700HM, J, 1/8W |
| R103 | ERJ8GCYJ561 | M 5600HM, J, 1/8W | R153 | ERJ8GCYJ271 | M 2700HM, J, 1/8W |
| R104 | ERDS1FJ100 | C 100HM, J, 1/2W | R154 | ERJ8GCYJ241 | M 2400HM, J, 1/8W |
| R105 | ERJ8GCYJ561 | M 5600HM, J, 1/8W | R155 | ERJ8GCYJ241 | M 2400HM, J, 1/8W |
| R106 | ERDS1FJ100 | C 100HM, J, 1/2W | R156 | ERJ8GCYJ241 | M 2400HM, J, 1/8W |
| R107 | ERJ8GCYJ561 | M 5600HM, J, 1/8W | R157 | ERJ8GCYJ241 | M 2400HM, J, 1/8W |
| R108 | ERJ8GCYJ824 | M 820KOHM, J, 1/8W | R158 | ERJ8GCYJ241 | M 2400HM, J, 1/8W |
| R109 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R159 | ERJ8GCYJ241 | M 2400HM, J, 1/8W |
| R110 | ERJ8GCYJ221 | M 2200HM, J, 1/8W | R160 | ERJ8GCYJ272 | M 2.7KOHM, J, 1/8W |
| R111 | ERJ8GCYJ824 | M 820KOHM, J, 1/8W | R161 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W |
| R112 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R162 | ERJ8GCYJ272 | M 2.7KOHM, J, 1/8W |
| R113 | ERJ8GCYJ221 | M 2200HM, J, 1/8W | R163 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W |
| | | | R164 | ERJ8GCYJ272 | M 2.7KOHM, J, 1/8W |
| R114 | ERJ8GCYJ824 | M 820KOHM, J, 1/8W | R165 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W |
| R115 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R166 | ERJ8GCYJ271 | M 2700HM, J, 1/8W |
| R116 | ERJ8GCYJ221 | M 2200HM, J, 1/8W | R167 | ERJ8GCYJ271 | M 2700HM, J, 1/8W |
| R117 | ERDS1FJ100 | C 100HM, J, 1/2W | R168 | ERJ8GCYJ271 | M 2700HM, J, 1/8W |
| R118 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R172 | ERJ8GCYJ271 | M 2700HM, J, 1/8W |
| | | | R173 | ERJ8GCYJ241 | M 2400HM, J, 1/8W |
| R119 | ERDS1FJ100 | C 100HM, J, 1/2W | R174 | ERJ8GCYJ271 | M 2700HM, J, 1/8W |
| R120 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R175 | ERJ8GCYJ241 | M 2400HM, J, 1/8W |
| R121 | ERDS1FJ100 | C 100HM, J, 1/2W | R176 | ERJ8GCYJ271 | M 2700HM, J, 1/8W |
| R122 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R177 | ERJ8GCYJ241 | M 2400HM, J, 1/8W |
| R123 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R178 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W |
| | | | R179 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W |
| R124 | ERJ8GCYJ183 | M 18KOHM, J, 1/8W | R180 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W |
| R125 | ERJ8GCYJ682 | M 6.8KOHM, J, 1/8W | R181 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W |
| R126 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W | R182 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R127 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W | R183 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W |
| R128 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W | R184 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W |
| R129 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R185 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R130 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R186 | EVN64AA00B14 | C V.REVISION 10KOHMB |
| R131 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R187 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W |
| R132 | ERJ8GCYJ101 | M 1000HM, J, 1/8W | R188 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W |
| R133 | EVN64AA00B54 | H. SHADING 50KOHMB | R189 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W |
| R134 | ERJ8GCYJ563 | M 56KOHM, J, 1/8W | R190 | ERJ8GCYJ202 | M 2KOHM, J, 1/8W |
| R135 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W | R191 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R136 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R192 | EVN64AA00B13 | H. REVISION 1KOHMB |
| R137 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R193 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W |
| R138 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R194 | ERJ8GCYJ101 | M 1000HM, J, 1/8W |
| R139 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R195 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W |

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|-------------|--------------------|----------|-------------|--------------------|
| R196 | ERJ8GCYJ392 | M 3.9KOHM, J, 1/8W | R241 | ERDS1FJ221 | C 2200HM, J, 1/2W |
| R197 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W | R242 | ERDS1FJ1RO | C 10HM, J, 1/2W |
| R198 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R243 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R199 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R244 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R201 | ERDS1FJ1RO | C 10HM, J, 1/2W | R245 | ERJ8GCYJ121 | M 1200HM, J, 1/8W |
| R202 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R246 | ERJ8GCYJ121 | M 1200HM, J, 1/8W |
| R203 | ERJ8GCYJ121 | M 1200HM, J, 1/8W | R247 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W |
| R204 | ERDS1FJ221 | C 2200HM, J, 1/2W | R248 | ERX2SJ8R2H | M 8.20HM, J, 2W |
| R205 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R249 | ERX2SJ8R2H | M 8.20HM, J, 2W |
| R206 | ERJ8GCYJ121 | M 1200HM, J, 1/8W | R250 | ERX2SJ8R2H | M 8.20HM, J, 2W |
| R207 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R251 | ERX2SJ8R2H | M 8.20HM, J, 2W |
| R208 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R252 | ERX2SJ8R2H | M 8.20HM, J, 2W |
| R209 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R253 | ERX2SJ8R2H | M 8.20HM, J, 2W |
| R210 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R254 | ERJ8GCYJ121 | M 1200HM, J, 1/8W |
| R211 | ERDS1FJ221 | C 2200HM, J, 1/2W | R255 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W |
| R212 | ERDS1FJ1RO | C 10HM, J, 1/2W | R256 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W |
| R213 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R257 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W |
| R214 | ERJ8GCYJ121 | M 1200HM, J, 1/8W | R301 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W |
| R215 | ERJ8GCYJ121 | M 1200HM, J, 1/8W | R302 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W |
| R216 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R303 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W |
| R217 | ERJ8GCYJ121 | M 1200HM, J, 1/8W | R304 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W |
| R218 | ERDS1FJ1RO | C 10HM, J, 1/2W | R305 | ERJ8GCYJ473 | M 47KOHM, J, 1/8W |
| R219 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R306 | ERJ8GCYJ273 | M 27KOHM, J, 1/8W |
| R220 | ERJ8GCYJ121 | M 1200HM, J, 1/8W | R307 | ERJ8GCYJ393 | M 39KOHM, J, 1/8W |
| R221 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R308 | ERJ8GCYJ331 | M 3300HM, J, 1/8W |
| R222 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R309 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W |
| R223 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R310 | ERJ8GCYJ224 | M 220KOHM, J, 1/8W |
| R224 | ERDS1FJ221 | C 2200HM, J, 1/2W | R311 | ERJ8GCYJ391 | M 3900HM, J, 1/8W |
| R225 | ERDS1FJ221 | C 2200HM, J, 1/2W | R312 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R226 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R313 | ERJ8GCYJ471 | M 4700HM, J, 1/8W |
| R227 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R314 | ERJ8GCYJ560 | M 560HM, J, 1/8W |
| R228 | ERJ8GCYJ121 | M 1200HM, J, 1/8W | R315 | ERJ8GCYJ221 | M 2200HM, J, 1/8W |
| R229 | ERDS1FJ1RO | C 10HM, J, 1/2W | R316 | ERJ8GCYJ101 | M 1000HM, J, 1/8W |
| R230 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R317 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R231 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R318 | ERJ8GCYJ821 | M 8200HM, J, 1/8W |
| R232 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R319 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W |
| R233 | ERJ8GCYJ121 | M 1200HM, J, 1/8W | R320 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W |
| R234 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R321 | ERJ8GCYJ750 | M 750HM, J, 1/8W |
| R235 | ERDS1FJ1RO | C 10HM, J, 1/2W | R322 | ERJ8GCYJ750 | M 750HM, J, 1/8W |
| R236 | ERJ8GCYJ121 | M 1200HM, J, 1/8W | R323 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W |
| R237 | ERDS1FJ221 | C 2200HM, J, 1/2W | R324 | ERJ8GCYJ822 | M 8.2KOHM, J, 1/8W |
| R238 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R325 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W |
| R239 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | | | |
| R240 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | | | |

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| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|---------------------|----------|--------------|-----------------------------|
| R326 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W | R370 | ERJ8GCYJ681 | M 6800HM, J, 1/8W |
| R327 | EVND4AA00B52 | 5000HMB | R371 | ERJ8GCYJ681 | M 6800HM, J, 1/8W |
| R328 | ERJ8GCYJ331 | M 3300HM, J, 1/8W | R372 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W |
| R329 | ERJ8GCYJ331 | M 3300HM, J, 1/8W | R373 | ERJ8GCYJ151 | M 1500HM, J, 1/8W |
| R330 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W | R374 | ERJ8GCYJ181 | M 1800HM, J, 1/8W |
| R331 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R375 | ERJ8GCYJ821 | M 8200HM, J, 1/8W |
| R332 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W | R376 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W |
| R333 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W | R377 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W |
| R334 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R378 | ERJ8GCYJ681 | M 6800HM, J, 1/8W |
| R335 | ERJ8GCYJ681 | M 6800HM, J, 1/8W | R379 | ERJ8GCYJ681 | M 6800HM, J, 1/8W |
| R336 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R380 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W |
| R337 | ERJ8GCYJ182 | M 1.8KOHM, J, 1/8W | R381 | ERJ8GCYJ181 | M 1800HM, J, 1/8W |
| R338 | ERJ8GCYJ681 | M 6800HM, J, 1/8W | R382 | ERJ8GCYJ682 | M 6.8KOHM, J, 1/8W |
| R339 | ERJ8GCYJ561 | M 5600HM, J, 1/8W | R383 | ERJ8GCYJ393 | M 39KOHM, J, 1/8W |
| R340 | ERJ8GCYJ121 | M 1200HM, J, 1/8W | R384 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W |
| R341 | ERJ8GCYJ681 | M 6800HM, J, 1/8W | R385 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W |
| R342 | ERJ8GCYJ331 | M 3300HM, J, 1/8W | R386 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W |
| R343 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R387 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R344 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W | R388 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R345 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W | R389 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R346 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R390 | ERJ8GCYJ822 | M 8.2KOHM, J, 1/8W |
| R347 | ERJ8GCYJ473 | M 47KOHM, J, 1/8W | R391 | ERJ8GCYJ822 | M 8.2KOHM, J, 1/8W |
| R348 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W | R392 | ERJ8GCYJ822 | M 8.2KOHM, J, 1/8W |
| R349 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R393 | ERJ8GCYJ474 | M 470KOHM, J, 1/8W |
| R350 | ERJ8GCYJ101 | M 1000HM, J, 1/8W | R397 | ERJ8GCYJ271 | M 2700HM, J, 1/8W |
| R351 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R398 | ERJ8GCY0R00 | M 00HM, J, 1/8W |
| R352 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R399 | ERDS1FJ101 | C 1000HM, J, 1/2W |
| R353 | EVND4AA00B53 | SUB CONTRAST 5KOHMB | R401 | ERJ8GCYJ682 | M 6.8KOHM, J, 1/8W |
| R354 | ERJ8GCYJ682 | M 6.8KOHM, J, 1/8W | R402 | ERJ8GCYJ471 | M 4700HM, J, 1/8W |
| R355 | ERJ8GCYJ183 | M 18KOHM, J, 1/8W | R403 | ERJ8GCYJ471 | M 4700HM, J, 1/8W |
| R356 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W | R404 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R357 | ERDS1FJ100 | C 100HM, J, 1/2W | R405 | ERJ8GCYJ102 | M 1000HM, J, 1/8W |
| R358 | ERJ8GCYJ151 | M 1500HM, J, 1/8W | R406 | ERJ8GCYJ101 | M 1000HM, J, 1/8W |
| R359 | ERJ8GCYJ181 | M 1800HM, J, 1/8W | R407 | ERJ8GCZJ125 | C 1.2MOHM, J, 1/8W |
| R360 | ERJ8GCYJ821 | M 8200HM, J, 1/8W | R413 | ERJ8GCYJ271 | M 2700HM, J, 1/8W |
| R361 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W | R414 | ERJ8GCYJ684 | M 680KOHM, J, 1/8W |
| R362 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W | R415 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W |
| R363 | ERJ8GCYJ681 | M 6800HM, J, 1/8W | R416 | EXBP84332J | R-NETWORK |
| R364 | ERJ8GCYJ681 | M 6800HM, J, 1/8W | R417 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W |
| R365 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W | R419 | EVND4AA00B54 | NTSC SUB V. HOLD 50KOHMB |
| R366 | ERJ8GCYJ151 | M 1500HM, J, 1/8W | R420 | ERJ8GCYJ393 | M 39KOHM, J, 1/8W |
| R367 | ERJ8GCYJ821 | M 8200HM, J, 1/8W | R421 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R368 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W | R423 | ERJ8GCYJ473 | M 47KOHM, J, 1/8W |
| R369 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W | R424 | EVND4AA00B24 | RGB V. HOLD 20KOHMB |
| | | | R425 | ERJ8GCYJ682 | M 6.8KOHM, J, 1/8W |

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|------------------------------|----------|--------------|--------------------------|
| R426 | EXBT44332M | R-NETWORK | R491 | ERJ8GCYJ271 | M 2700HM, J, 1/8W |
| R427 | EXBP84332J | R-NETWORK | R492 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R428 | EVND4AA00B25 | VIDEO V. SIZE 200KOHMB | R493 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W |
| R429 | ERJ8GCYJ563 | M 56KOHM, J, 1/8W | R494 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R432 | EVND4AA00B25 | NTSC SUB V. SIZE 200KOHMB | R497 | ERJ8GCYJ824 | M 820KOHM, J, 1/8W |
| R433 | ERJ8GCYJ124 | M 120KOHM, J, 1/8W | R498 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R434 | ERJ8GCYJ473 | M 47KOHM, J, 1/8W | R503 | EXBP84332J | R-NETWORK |
| R437 | EVND4AA00B35 | RGB V. SIZE .300KOHMB | R506 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W |
| R438 | ERJ8GCYJ101 | M 1000HM, J, 1/8W | R507 | ERJ8GCYJ681 | M 6800HM, J, 1/8W |
| R439 | ERG1SJ561P | M 5600HM, J, 1W | R512 | ERJ8GCYJ682 | M 6.8KOHM, J, 1/8W |
| R440 | ERDS1FJ102 | C 1KOHM, J, 1/2W | R513 | ERJ8GCYJ682 | M 6.8KOHM, J, 1/8W |
| R441 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R514 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W |
| R442 | EVND4AA00B34 | V. LIN 30KOHMB | R515 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W |
| R443 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R516 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W |
| R444 | ERJ8GCYJ681 | M 6800HM, J, 1/8W | R517 | ERJ8GCYJ471 | M 4700HM, J, 1/8W |
| R451 | ERJ8GCYJ392 | M 3.9KOHM, J, 1/8W | R518 | ERJ8GCYJ471 | M 4700HM, J, 1/8W |
| R452 | ERJ8GCYJ473 | M 47KOHM, J, 1/8W | R519 | EVND4AA00B13 | P/S H. HOLD 1KOHMB |
| R453 | ERJ8GCYJ823 | M 82KOHM, J, 1/8W | R520 | EVND4AA00B13 | NTSC V. HOLD 1KOHMB |
| R454 | ERDS1FJ332 | C 3.3KOHM, J, 1/2W | R521 | ER025CKG1801 | M 1.8KOHM, J, 1/4W |
| R455 | ERG2SJ222H | M 2.2KOHM, J, 2W | R522 | ERJ8GCYJ471 | M 4700HM, J, 1/8W |
| R456 | ERG2SJ332H | M 3.3KOHM, J, 2W | R523 | EVND4AA00B13 | RGB V. HOLD 1KOHMB |
| R457 | ERDS1TJ102 | C 1KOHM, J, 1/2W | △R530 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R458 | ERDS1TJ3R3 | C 3.3OHM, J, 1/2W | R531 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W |
| R459 | ERDS1TJ223 | C 22KOHM, J, 1/2W | R532 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| △R461 | ERQ2CJ680 | F 680HM, 2W | R533 | ERG2ANJ152H | M 1.5KOHM, J, 2W |
| | | | △R534 | EVND4AA00B33 | PROTECTOR ADJ. 3KOHMB |
| R462 | ERDS1FJ3R3 | C 3.3OHM, J, 1/2W | | | |
| R463 | ERDS1FJ3R3 | C 3.3OHM, J, 1/2W | △R535 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W |
| R464 | ERG1SJ102P | M 1KOHM, J, 1W | △R537 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W |
| R465 | ERG1SJ221P | M 2200HM, J, 1W | △R538 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W |
| R466 | ERD25FJ1R0 | C 10HM, J, 1/4W | △R539 | ERD25FJ222 | C 2.2KOHM, J, 1/4W |
| R467 | ERG2SJ272H | M 2.7KOHM, J, 2W | △R540 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W |
| R468 | ERD25FJ472 | C 4.7KOHM, J, 1/4W | △R541 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R469 | ERJ8GCYJ101 | M 1000HM, J, 1/8W | △R542 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R470 | ERJ8GCYJ271 | M 2700HM, J, 1/8W | △R543 | ERJ8GCYJ682 | M 6.8KOHM, J, 1/8W |
| R481 | ERJ8GCYJ333 | M 33KOHM, J, 1/8W | △R544 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W |
| R482 | ERJ8GCYJ101 | M 1000HM, J, 1/8W | △R545 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R483 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W | R551 | ERJ8GCYJ333 | M 33KOHM, J, 1/8W |
| R484 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R552 | ERJ8GCYJ332 | C 3.3KOHM, J, 1/8W |
| R485 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R553 | ERJ8GCYJ101 | M 1000HM, J, 1/8W |
| R486 | ERD25FJ100 | C 100HM, J, 1/4W | R554 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R487 | ERJ8GCYJ563 | M 56KOHM, J, 1/8W | R557 | ERJ8GCYJ104 | C 100KOHM, J, 1/8W |
| R488 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W | R558 | ERJ8GCYJ104 | C 100KOHM, J, 1/8W |
| R489 | ERJ8GCYJ473 | M 47KOHM, J, 1/8W | R559 | ERJ8GCYJ683 | M 68KOHM, J, 1/8W |
| R490 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W | R560 | ERJ8GCYJ271 | M 2700HM, J, 1/8W |

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| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|----------------------|----------|--------------|-----------------------|
| R561 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W | R632 | ERJ8GCYJ471 | M 4700HM, J, 1/8W |
| R562 | ERJ8GCYJ272 | M 2.7KOHM, J, 1/8W | R633 | EVND4AAOOB23 | DL. ADJ. 2KOHMB |
| R563 | ERD25FJ100 | C 100HM, J, 1/4W | R634 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W |
| R564 | ERJ8GCYJ101 | M 1000HM, J, 1/8W | R635 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W |
| R567 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W | R636 | ERJ8GCYJ823 | M 82KOHM, J, 1/8W |
| R568 | EVND4AAOOB24 | H. CENTERING 20KOHMB | R637 | ERJ8GCYJ822 | M 8.2KOHM, J, 1/8W |
| R576 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W | R638 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W |
| R577 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W | R639 | ERJ8GCYJ561 | M 5600HM, J, 1/8W |
| R582 | ERJ8GCYJ101 | M 1000HM, J, 1/8W | R641 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R583 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R642 | ERJ8GCYJ331 | M 3300HM, J, 1/8W |
| R584 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R643 | ERJ8GCYJ331 | M 3300HM, J, 1/8W |
| R585 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R644 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R586 | ERJ8GCYJ122 | M 1.2KOHM, J, 1/8W | R645 | ERJ8GCYJ331 | M 3300HM, J, 1/8W |
| R588 | EXBP84473J | R-NETWORK | R646 | EVND4AAOOB53 | R-Y GAIN 5KOHMB |
| R589 | EXBP84473J | R-NETWORK | R647 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W |
| R590 | ERDS1TJ331 | C 3300HM, J, 1/2W | R648 | ERJ8GCYJ221 | M 2200HM, J, 1/8W |
| ΔR591 | ERDS1TJ823 | C 82KOHM, J, 1/2W | R649 | ERJ8GCYJ333 | M 33KOHM, J, 1/8W |
| R601 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W | R650 | ERJ8GCYJ221 | M 2200HM, J, 1/8W |
| R602 | ERJ8GCYJ272 | M 2.7KOHM, J, 1/8W | R651 | EVND4AAOOB23 | SECAM DL. ADJ. 2KOHMB |
| R603 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W | R652 | ERJ8GCYJ561 | M 5600HM, J, 1/8W |
| R604 | ERJ8GCYJ682 | M 6.8KOHM, J, 1/8W | R653 | ERJ8GCYJ392 | M 3.9KOHM, J, 1/8W |
| R605 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W | R654 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R606 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W | R655 | ERJ8GCYJ391 | M 3900HM, J, 1/8W |
| R607 | ERJ8GCYJ392 | M 3.9KOHM, J, 1/8W | R656 | ERJ8GCYJ391 | M 3900HM, J, 1/8W |
| R608 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R657 | ERJ8GCYJ391 | M 3900HM, J, 1/8W |
| R609 | ERJ8GCYJ182 | M 1.8KOHM, J, 1/8W | | | |
| R610 | ERJ8GCYJ823 | M 82KOHM, J, 1/8W | R658 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W |
| R611 | ERJ8GCYJ333 | M 33KOHM, J, 1/8W | R659 | EVND4AAOOB53 | B-Y DL. 5KOHMB |
| R612 | ERJ8GCYJ395 | C 3.9MOHM, J, 1/8W | R660 | ERJ8GCYJ681 | M 6800HM, J, 1/8W |
| R613 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W | R661 | ERJ8GCYJ272 | M 2.7KOHM, J, 1/8W |
| R614 | ERJ8GCYJ471 | M 4700HM, J, 1/8W | R662 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R616 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R663 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W |
| R617 | ERJ8GCYJ183 | C 18KOHM, J, 1/8W | R664 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W |
| R618 | ERJ8GCYJ104 | C 100KOHM, J, 1/8W | R665 | ERJ8GCYJ391 | M 3900HM, J, 1/8W |
| R619 | EVND4AAOOB14 | APC 1OKOHMB | R666 | ERJ8GCYJ221 | M 2200HM, J, 1/8W |
| R620 | ERJ8GCYJ221 | M 2200HM, J, 1/8W | R667 | ERJ8GCYJ224 | M 220KOHM, J, 1/8W |
| R621 | ERJ8GCYJ821 | M 8200HM, J, 1/8W | R671 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W |
| R622 | ERJ8GCYJ392 | M 3.9KOHM, J, 1/8W | R672 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W |
| R624 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W | R673 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W |
| R626 | ERJ8GCYJ224 | C 220KOHM, J, 1/8W | R674 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W |
| R627 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R675 | ERJ8GCYJ683 | M 68KOHM, J, 1/8W |
| R628 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R676 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W |
| R629 | EVND4AAOOB14 | SUB COLOR 1OKOHMB | R677 | ERDS1FJ100 | C 100HM, J, 1/2W |
| R630 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R678 | ERJ8GCYJ273 | C 27KOHM, J, 1/8W |
| R631 | ERDS1FJ100 | C 100HM, J, 1/2W | R679 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W |
| | | | R680 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W |

| Ref. No. | Part No. | Description | | Ref. No. | Part No. | Description | |
|----------|--------------|-------------|------------------|----------|--------------|-------------|------------------|
| R681 | ERJ8GCYJ103 | M | 10KOHM, J, 1/8W | R729 | ERJ8GCYJ472 | M | 4.7KOHM, J, 1/8W |
| R682 | ERJ8GCYJ101 | M | 1000HM, J, 1/8W | R730 | ERD25FJ102 | C | 1KOHM, J, 1/4W |
| R683 | ERJ8GCYJ393 | M | 39KOHM, J, 1/8W | R731 | ERD25FJ120 | C | 120HM, J, 1/4W |
| R684 | ERJ8GCYJ562 | M | 5.6KOHM, J, 1/8W | R732 | ERJ8GCYJ123 | M | 12KOHM, J, 1/8W |
| R685 | ERJ8GCYJ684 | M | 680KOHM, J, 1/8W | R733 | ERJ8GCYJ154 | C | 150KOHM, J, 1/8W |
| R686 | ERJ8GCYJ472 | M | 4.7KOHM, J, 1/8W | R734 | ERJ8GCYJ103 | M | 10KOHM, J, 1/8W |
| R687 | ERJ8GCYJ222 | M | 2.2KOHM, J, 1/8W | R735 | ERJ8GCYJ123 | M | 12KOHM, J, 1/8W |
| R688 | ERJ8GCYJ472 | M | 4.7KOHM, J, 1/8W | R736 | ERJ8GCYJ102 | M | 1KOHM, J, 1/8W |
| R689 | ERJ8GCYJ562 | M | 5.6KOHM, J, 1/8W | R737 | ERJ8GCYJ222 | M | 2.2KOHM, J, 1/8W |
| R690 | ERJ8GCYJ682 | M | 6.8KOHM, J, 1/8W | R738 | ERJ8GCYJ821 | M | 8200HM, J, 1/8W |
| R691 | ERJ8GCYJ102 | M | 1KOHM, J, 1/8W | R739 | ERJ8GCYJ273 | M | 27KOHM, J, 1/8W |
| R692 | ERJ8GCYJ103 | M | 10KOHM, J, 1/8W | R740 | ERJ8GCYJ103 | M | 10KOHM, J, 1/8W |
| R693 | ERJ8GCYJ823 | M | 82KOHM, J, 1/8W | R741 | ERJ8GCYJ103 | M | 10KOHM, J, 1/8W |
| R694 | ERJ8GCYJ104 | M | 100KOHM, J, 1/8W | R742 | ERJ8GCYJ472 | M | 4.7KOHM, J, 1/8W |
| R695 | ERJ8GCYJ104 | M | 100KOHM, J, 1/8W | R743 | ERJ8GCYJ684 | M | 680KOHM, J, 1/8W |
| R696 | ERJ8GCYJ153 | M | 15KOHM, J, 1/8W | R744 | ERJ8GCYJ682 | M | 6.8KOHM, J, 1/8W |
| R697 | ERJ8GCYJ104 | M | 100KOHM, J, 1/8W | R745 | EVND4H00GB24 | H/L PIN. | 20KOHMB |
| R698 | ERJ8GCYJ102 | M | 1KOHM, J, 1/8W | R746 | ERJ8GCYJ123 | M | 12KOHM, J, 1/8W |
| R701 | ERJ8GCYJ102 | M | 1KOHM, J, 1/8W | R753 | ERJ8GCYJ333 | M | 33KOHM, J, 1/8W |
| R702 | ERJ8GCYJ332 | M | 3.3KOHM, J, 1/8W | R755 | ERJ8GCYJ472 | M | 4.7KOHM, J, 1/8W |
| R704 | ERJ8GCYJ333 | M | 33KOHM, J, 1/8W | R756 | ERO25CKF1203 | M | 120KOHM, F, 1/4W |
| R705 | ERJ8GCYJ472 | M | 4.7KOHM, J, 1/8W | R757 | ERO25CKF4702 | M | 47KOHM, F, 1/4W |
| R707 | ERJ8GCYJ103 | M | 10KOHM, J, 1/8W | R758 | ERDS1TJ471 | C | 4700HM, J, 1/2W |
| R708 | ERJ8GCYJ103 | M | 10KOHM, J, 1/8W | R759 | ERDS1TJ471 | C | 4700HM, J, 1/2W |
| R709 | ERJ8GCYJ102 | M | 1KOHM, J, 1/8W | R760 | ERO25CKF2002 | M | 20KOHM, F, 1/4W |
| R710 | ERD25FJ100 | C | 100HM, J, 1/4W | R761 | ERO25CKF2002 | M | 20KOHM, F, 1/4W |
| R711 | ERJ8GCYJ473 | C | 47KOHM, J, 1/8W | R762 | ERO25CKF6800 | M | 6800HM, F, 1/4W |
| R712 | ERJ8GCYJ103 | M | 10KOHM, J, 1/8W | R763 | ERO25CKF6800 | M | 6800HM, F, 1/4W |
| R713 | ERJ8GCYJ331 | M | 3300HM, J, 1/8W | R764 | ERO25CKF2002 | M | 20KOHM, F, 1/4W |
| R714 | ERO25CKF2002 | M | 20KOHM, F, 1/4W | R765 | ERD25FJ471 | C | 4700HM, J, 1/4W |
| R715 | ERO25CKF1203 | M | 120KOHM, F, 1/4W | R766 | ERO25CKF3301 | M | 3.3KOHM, F, 1/4W |
| R716 | ERD25FJ100 | C | 100HM, J, 1/4W | R767 | ERO25CKF1203 | M | 120KOHM, F, 1/4W |
| R717 | ERO25CKF4702 | M | 47KOHM, F, 1/4W | R768 | ERJ8GCYJ273 | M | 27KOHM, J, 1/8W |
| R718 | ERJ8GCYJ272 | M | 2.7KOHM, J, 1/8W | R769 | ERJ8GCYJ822 | M | 8.2KOHM, J, 1/8W |
| R719 | ERJ8GCYJ272 | M | 2.7KOHM, J, 1/8W | R770 | ERJ8GCYJ102 | M | 1KOHM, J, 1/8W |
| R720 | ERO25CKF2002 | M | 20KOHM, F, 1/4W | R771 | ERD25FJ222 | C | 2.2KOHM, J, 1/4W |
| R721 | ERD25FJ471 | C | 4700HM, J, 1/4W | R772 | ERDS1FJ222 | C | 2.2KOHM, J, 1/2W |
| R722 | ERO25CKF3301 | M | 3.3KOHM, F, 1/4W | R774 | ERDS1FJ821 | C | 8200HM, J, 1/2W |
| R723 | ERO25CKF6800 | M | 6800HM, F, 1/4W | R775 | ERDS1FJ330 | C | 330HM, J, 1/2W |
| R724 | ERO25CKF6800 | M | 6800HM, F, 1/4W | R776 | ERJ8GCYJ101 | M | 1000HM, J, 1/8W |
| R725 | ERO25CKF1203 | M | 120KOHM, F, 1/4W | R777 | ERJ8GCYJ334 | M | 330KOHM, J, 1/8W |
| R726 | ERO25CKF2002 | M | 20KOHM, F, 1/4W | R778 | ERJ8GCZU155 | M | 1.5MOHM, J, 1/8W |
| R727 | ERJ8GCYJ472 | M | 4.7KOHM, J, 1/8W | R780 | ERJ8GCYJ563 | M | 56KOHM, J, 1/8W |
| R728 | ERD25FJ472 | C | 4.7KOHM, J, 1/4W | R781 | ERJ8GCYJ563 | M | 56KOHM, J, 1/8W |

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| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|-------------------------------------|----------|--------------|----------------------------|
| R782 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W | R832 | ERJ8GCYJ822 | M 8.2KOHM, J, 1/8W |
| R783 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R833 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W |
| R784 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W | R834 | ERJ8GCYJ471 | M 4700HM, J, 1/8W |
| R785 | ERDS1TJ102 | C 1KOHM, J, 1/2W | R835 | ERJ8GCYJ563 | M 56KOHM, J, 1/8W |
| R786 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W | R836 | ERJ8GCYJ272 | M 2.7KOHM, J, 1/8W |
| R787 | EVND4AA00B52 | H. KEYSTONE WAVE CORRECTION 5000HMB | R837 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W |
| R788 | EVND4H00GB24 | H/L PIN. 20KOHMB | R838 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W |
| R789 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W | R839 | ERJ8GCYJ272 | M 2.7KOHM, J, 1/8W |
| R790 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W | R840 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W |
| R791 | EVND4AA00B52 | H. KEYSTONE WAVE CORRECTION 5000HMB | R841 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W |
| R792 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W | R842 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W |
| R793 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W | R843 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W |
| R794 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W | R844 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W |
| R795 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R845 | ERJ8GCYJ154 | M 150KOHM, J, 1/8W |
| R796 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W | R846 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W |
| R797 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W | R847 | ERJ8GCYJ683 | M 68KOHM, J, 1/8W |
| R798 | ERJ8GCYJ682 | M 6.8KOHM, J, 1/8W | R848 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W |
| R799 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W | R849 | ERJ8GCYJ274 | M 270KOHM, J, 1/8W |
| R800 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W | R850 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W |
| R801 | ERJ8GCYJ473 | M 47KOHM, J, 1/8W | R851 | ERJ8GCYJ683 | M 68KOHM, J, 1/8W |
| R802 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R852 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W |
| R803 | ERJ8GCYJ563 | M 56KOHM, J, 1/8W | R853 | ERJ8GCYJ154 | M 150KOHM, J, 1/8W |
| R804 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W | R854 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W |
| R805 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R859 | ERDS1FJ1RO | C 10HM, J, 1/2W |
| R806 | ERJ8GCYJ822 | M 8.2KOHM, J, 1/8W | R860 | ERDS1FJ1R2 | C 1.20HM, J, 1/2W |
| R807 | ERJ8GCYJ823 | M 82KOHM, J, 1/8W | R862 | ERDS1FJ471 | C 4700HM, J, 1/2W |
| R808 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R863 | ERJ8GCYJ224 | C 220KOHM, J, 1/8W |
| R809 | ERJ8GCYJ682 | M 6.8KOHM, J, 1/8W | R865 | ERJ8GCYJ154 | C 150KOHM, J, 1/8W |
| R810 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R866 | ERDS1FJ1R2 | C 1.20HM, J, 1/2W |
| R811 | ERJ8GCYJ274 | M 270KOHM, J, 1/8W | R867 | ERDS1FJ1RO | C 10HM, J, 1/2W |
| R812 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W | R868 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R813 | ERJ8GCYJ392 | M 3.9KOHM, J, 1/8W | R869 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W |
| R814 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W | R870 | EVND4H00RB24 | B-H CONVERGENCE 20KOHMB |
| R815 | ERJ8GCYJ822 | M 8.2KOHM, J, 1/8W | R871 | EVND4H00RB24 | B-H CONVERGENCE 20KOHMB |
| R816 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W | R872 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W |
| R817 | ERJ8GCYJ471 | M 4700HM, J, 1/8W | R873 | EVND4H00RB24 | B-H CONVERGENCE 20KOHMB |
| R818 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W | R874 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W |
| R819 | ERJ8GCYJ563 | M 56KOHM, J, 1/8W | R875 | ERJ8GCYJ273 | M 27KOHM, J, 1/8W |
| R820 | ERJ8GCYJ272 | M 2.7KOHM, J, 1/8W | R876 | EVND4H00RB24 | B-H CONVERGENCE 20KOHMB |
| R821 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W | R877 | ERJ8GCYJ682 | M 6.8KOHM, J, 1/8W |
| R822 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W | R878 | EVND4H00RB24 | B-H CONVERGENCE 20KOHMB |
| R823 | ERJ8GCYJ272 | M 2.7KOHM, J, 1/8W | R879 | ERJ8GCYJ682 | M 6.8KOHM, J, 1/8W |
| R824 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W | R880 | EVND4H00RB24 | B-H CONVERGENCE 20KOHMB |
| R825 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W | R881 | ERJ8GCYJ682 | M 6.8KOHM, J, 1/8W |
| R826 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W | R882 | EVND4H00RB24 | B-H CONVERGENCE 20KOHMB |
| R827 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W | | | |
| R828 | ERJ8GCYJ473 | M 47KOHM, J, 1/8W | | | |
| R829 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | | | |
| R830 | ERJ8GCYJ392 | M 3.9KOHM, J, 1/8W | | | |
| R831 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W | | | |

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|----------------------------|----------|--------------|----------------------------|
| R883 | ERJ8GCYJ682 | M 6.8KOHM, J,1/8W | R918 | ERJ8GCYJ682 | M 6.8KOHM, J,1/8W |
| R884 | EVND4H00RB24 | R-H CONVERGENCE 20KOHMB | R919 | EVND4H00BB24 | B-V CONVERGENCE 20KOHMB |
| R885 | EVND4H00RB24 | R-H CONVERGENCE 20KOHMB | R920 | ERJ8GCYJ682 | M 6.8KOHM, J,1/8W |
| R886 | ERJ8GCYJ472 | M 4.7KOHM, J,1/8W | R921 | EVND4H00BB24 | B-V CONVERGENCE 20KOHMB |
| R887 | EVND4H00RB24 | R-H CONVERGENCE 20KOHMB | R922 | ERJ8GCYJ472 | M 4.7KOHM, J,1/8W |
| R888 | ERJ8GCYJ683 | M 68KOHM, J,1/8W | R923 | EVND4H00BB24 | B-V CONVERGENCE 20KOHMB |
| R889 | ERJ8GCYJ562 | M 5.6KOHM, J,1/8W | R924 | EVND4H00BB24 | B-H CONVERGENCE 20KOHMB |
| R890 | EVND4H00RB24 | R-H CONVERGENCE 20KOHMB | R925 | ERJ8GCYJ562 | M 5.6KOHM, J,1/8W |
| R891 | ERJ8GCYJ103 | M 10KOHM, J,1/8W | R926 | EVND4H00BB24 | B-H CONVERGENCE 20KOHMB |
| R892 | EVND4H00RB24 | R-H CONVERGENCE 20KOHMB | R927 | ERJ8GCYJ103 | M 10KOHM, J,1/8W |
| R893 | ERJ8GCYJ153 | M 15KOHM, J,1/8W | R928 | EVND4H00BB24 | B-V CONVERGENCE 20KOHMB |
| R894 | EVND4H00RB24 | R-H CONVERGENCE 20KOHMB | R929 | ERJ8GCYJ153 | M 15KOHM, J,1/8W |
| R895 | ERJ8GCYJ562 | M 5.6KOHM, J,1/8W | R930 | EVND4H00BB24 | B-H CONVERGENCE 20KOHMB |
| R896 | EVND4H00RB24 | R-H CONVERGENCE 20KOHMB | R931 | ERJ8GCYJ562 | M 5.6KOHM, J,1/8W |
| R897 | ERJ8GCYJ472 | M 4.7KOHM, J,1/8W | R932 | EVND4H00BB24 | B-H CONVERGENCE 20KOHMB |
| R898 | EVND4H00RB24 | R-H CONVERGENCE 20KOHMB | R933 | ERJ8GCYJ683 | M 68KOHM, J,1/8W |
| R899 | ERJ8GCYJ153 | M 15KOHM, J,1/8W | R934 | ERJ8GCYJ472 | M 4.7KOHM, J,1/8W |
| R900 | EVND4H00RB24 | R-H CONVERGENCE 20KOHMB | R935 | EVND4H00BB24 | B-H CONVERGENCE 20KOHMB |
| R901 | EVND4H00RB24 | R-H CONVERGENCE 20KOHMB | R936 | ERJ8GCYJ153 | M 15KOHM, J,1/8W |
| R902 | ERJ8GCYJ153 | M 15KOHM, J,1/8W | R937 | EVND4H00BB24 | B-H CONVERGENCE 20KOHMB |
| R903 | ERJ8GCYJ153 | M 15KOHM, J,1/8W | R938 | ERJ8GCYJ153 | M 15KOHM, J,1/8W |
| R904 | EVND4H00RB24 | R-H CONVERGENCE 20KOHMB | R939 | EVND4H00BB24 | B-H CONVERGENCE 20KOHMB |
| R905 | EVND4H00RB24 | R-H CONVERGENCE 20KOHMB | R940 | ERJ8GCYJ153 | M 15KOHM, J,1/8W |
| R906 | ERJ8GCYJ562 | M 5.6KOHM, J,1/8W | R941 | EVND4H00BB24 | B-H CONVERGENCE 20KOHMB |
| R907 | EVND4H00BB24 | B-V CONVERGENCE 20KOHMB | R942 | ERJ8GCYJ153 | M 15KOHM, J,1/8W |
| R908 | ERJ8GCYJ153 | M 15KOHM, J,1/8W | R943 | EVND4H00BB24 | B-H CONVERGENCE 20KOHMB |
| R909 | EVND4H00BB24 | B-V CONVERGENCE 20KOHMB | R944 | EVND4H00GB24 | H/L PIN. L 20KOHMB |
| R910 | ERJ8GCYJ153 | M 15KOHM, J,1/8W | R945 | ERJ8GCYJ472 | M 4.7KOHM, J,1/8W |
| R911 | EVND4H00BB24 | B-V CONVERGENCE 20KOHMB | R946 | ERJ8GCYJ223 | M 22KOHM, J,1/8W |
| R912 | ERJ8GCYJ273 | M 27KOHM, J,1/8W | R947 | ERJ8GCYJ222 | M 2.2KOHM, J,1/8W |
| R913 | EVND4H00BB24 | B-V CONVERGENCE 20KOHMB | R948 | ERJ8GCYJ153 | M 15KOHM, J,1/8W |
| R914 | ERJ8GCYJ682 | M 6.8KOHM, J,1/8W | R949 | ERJ8GCYJ153 | M 15KOHM, J,1/8W |
| R915 | EVND4H00BB24 | B-V CONVERGENCE 20KOHMB | R950 | ERJ8GCYJ102 | M 1KOHM, J,1/8W |
| R916 | ERJ8GCYJ682 | M 6.8KOHM, J,1/8W | R951 | ERJ8GCYJ472 | M 4.7KOHM, J,1/8W |
| R917 | EVND4H00BB24 | B-V CONVERGENCE 20KOHMB | R952 | ERJ8GCYJ272 | M 2.7KOHM, J,1/8W |
| | | | R953 | ERJ8GCYJ473 | M 47KOHM, J,1/8W |
| | | | R954 | ERJ8GCYJ104 | M 100KOHM, J,1/8W |
| | | | R955 | EVND4AA00B52 | T/B PIN CORRECTION |

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| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|-------------------------------------|----------|--------------|--------------------|
| R956 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W | R1035 | ERDS1TJ271 | C 2700HM, J, 1/2W |
| R958 | EVND4AA00B52 | T/B PIN CORRECTION 5000HMB | R1036 | ERD25FJ271 | C 2700HM, J, 1/4W |
| R960 | ERJ8GCYJ473 | M 47KOHM, J, 1/8W | R1037 | ERD25FJ271 | C 2700HM, J, 1/4W |
| R961 | ERDS1TJ152 | C 1.5KOHM, J, 1/2W | R1038 | ERD25FJ271 | C 2700HM, J, 1/4W |
| R962 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W | R1039 | ERD25FJ271 | C 2700HM, J, 1/4W |
| R970 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R1040 | ERD25FJ271 | C 2700HM, J, 1/4W |
| R971 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R1041 | ERDS1TJ271 | C 2700HM, J, 1/2W |
| R972 | ERJ8GCYJ273 | M 27KOHM, J, 1/8W | R1042 | ERDS1TJ271 | C 2700HM, J, 1/2W |
| R974 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W | R1043 | ERDS1TJ271 | C 2700HM, J, 1/2W |
| R978 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W | R1044 | ERDS1TJ271 | C 2700HM, J, 1/2W |
| R979 | ERD25FJ182 | C 1.8KOHM, J, 1/4W | R1045 | ERDS1TJ271 | C 2700HM, J, 1/2W |
| R980 | ERD25FJ100 | C 100HM, J, 1/4W | R1046 | ERD25FJ271 | C 2700HM, J, 1/4W |
| △R981 | ERQ12HJ101P | F 1000HM, J, 1/2W | R1047 | ERD25FJ271 | C 2700HM, J, 1/4W |
| R982 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R1048 | ERD25FJ271 | C 2700HM, J, 1/4W |
| R983 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W | R1053 | ERD25FJ271 | C 2700HM, J, 1/4W |
| R984 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W | R1054 | ERD25FJ271 | C 2700HM, J, 1/4W |
| R985 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R1055 | ERD25FJ101 | C 1000HM, J, 1/4W |
| R986 | EVND4AA00B24 | KEY STONE CORRECTION 20KOHMB | R1060 | ERD25FJ223 | C 22KOHM, J, 1/4W |
| R987 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R1061 | ERD25FJ123 | C 12KOHM, J, 1/4W |
| R988 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R1062 | ERDS1TJ681 | C 6800HM, J, 1/2W |
| R989 | ERJ8GCYJ823 | M 82KOHM, J, 1/8W | R1063 | ERD25TJ271 | C 2700HM, J, 1/4W |
| R990 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W | R1064 | ERD25TJ271 | C 2700HM, J, 1/4W |
| R991 | ERJ8GCYJ182 | M 1.8KOHM, J, 1/8W | R1065 | ERD25TJ271 | C 2700HM, J, 1/4W |
| R993 | EVND4AA00B24 | SIDE PIN. COMPENSATI -ON 20KOHMB | R1066 | ERD25TJ101 | M 1000HM, J, 1/4W |
| R994 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W | R1101 | ERJ8GCYJ101 | C 1000HM, J, 1/8W |
| R995 | ERJ8GCYJ182 | M 1.8KOHM, J, 1/8W | R1102 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W |
| R996 | ERJ8GCYJ104 | C 100KOHM, J, 1/8W | R1103 | EVN64AA00B24 | SUBCONTRAST20KOHMB |
| R997 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W | R1104 | ERJ8GCYJ101 | M 1000HM, J, 1/8W |
| R998 | ERJ8GCYJ473 | C 47KOHM, J, 1/8W | R1105 | ERJ8GCYJ682 | M 6.8KOHM, J, 1/8W |
| R999 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W | R1106 | ERJ8GCYJ183 | M 18KOHM, J, 1/8W |
| R1001 | ERDS1FJ331 | C 3300HM, J, 1/2W | R1107 | EVN64AA00B14 | SUB BRIGHT 10KOHMB |
| R1002 | ERD25FJ560 | C 560HM, J, 1/4W | R1108 | ERJ8GCYJ154 | C 150KOHM, J, 1/8W |
| R1003 | ERD25FJ102 | C 1KOHM, J, 1/4W | R1109 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W |
| R1004 | ERD25FJ103 | C 10KOHM, J, 1/4W | R1110 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R1005 | ERD25FJ223 | C 22KOHM, J, 1/4W | R1111 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R1006 | ERD25FJ393 | C 39KOHM, J, 1/4W | R1112 | ERDS1FJ1R0 | C 10HM, J, 1/2W |
| R1008 | ERD25FJ123 | C 12KOHM, J, 1/4W | R1113 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W |
| R1009 | ERDS1TJ681 | C 6800HM, J, 1/2W | R1114 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R1010 | ERDS1FJ100 | C 100HM, J, 1/2W | R1115 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R1011 | ERDS1FJ220 | C 220HM, J, 1/2W | R1116 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R1020 | ERD25FJ224 | C 220KOHM, J, 1/4W | R1117 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W |
| R1021 | ERD25FJ102 | C 1KOHM, J, 1/4W | R1118 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W |
| R1025 | ERD25FJ333 | C 33KOHM, J, 1/4W | R1119 | ERJ8GCYJ561 | M 5600HM, J, 1/8W |
| R1028 | ERD25FJ223 | C 22KOHM, J, 1/4W | R1120 | EVN64AA00B33 | CH. 3KOHMB |
| R1029 | ERD25FJ271 | C 2700HM, J, 1/4W | R1121 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W |
| R1030 | ERD25FJ271 | C 2700HM, J, 1/4W | R1122 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W |
| R1031 | ERD25FJ271 | C 2700HM, J, 1/4W | R1123 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W |
| R1032 | ERD25FJ271 | C 2700HM, J, 1/4W | R1124 | ERJ8GCYJ182 | M 1.8KOHM, J, 1/8W |
| R1033 | ERD25FJ271 | C 2700HM, J, 1/4W | R1125 | ERJ8GCYJ182 | M 1.8KOHM, J, 1/8W |
| R1034 | ERDS1TJ271 | C 2700HM, J, 1/2W | | | |

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|--------------------|----------|-------------|--------------------|
| R1126 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R1178 | ERDS1FJ820 | C 820HM, J, 1/2W |
| R1127 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R1179 | ERJ8GCYJ332 | M 3.3KOHM, J, 1/8W |
| R1128 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W | R1180 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W |
| R1129 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W | R1181 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W |
| R1130 | ERJ8GCYJ152 | M 1.5KOHM, J, 1/8W | R1182 | ERJ8GCYJ272 | M 2.7KOHM, J, 1/8W |
| R1131 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R1183 | ERJ8GCYJ393 | M 39KOHM, J, 1/8W |
| R1132 | ERJ8GCYJ272 | M 2.7KOHM, J, 1/8W | R1184 | ERJ8GCYJ202 | M 2KOHM, J, 1/8W |
| R1133 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W | R1185 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W |
| R1134 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W | R1186 | ERJ8GCYJ272 | M 2.7KOHM, J, 1/8W |
| R1135 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R1187 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W |
| R1136 | ERJ8GCYJ273 | M 27KOHM, J, 1/8W | R1188 | ERJ8GCYJ391 | M 3900HM, J, 1/8W |
| R1137 | ERDS1FJ221 | C 2200HM, J, 1/2W | R1189 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W |
| R1138 | ERJ8GCYJ182 | M 1.8KOHM, J, 1/8W | R1190 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R1139 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R1191 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W |
| R1140 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R1192 | ERJ8GCYJ562 | M 5.6KOHM, J, 1/8W |
| R1141 | EVN64AA00B53 | CH.BRIGHT 5KOHMB | R1193 | ERJ8GCYJ684 | M 680KOHM, J, 1/8W |
| R1142 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W | R1194 | ERJ8GCYJ684 | M 680KOHM, J, 1/8W |
| R1143 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W | R1195 | ERJ8GCYJ684 | M 680KOHM, J, 1/8W |
| R1144 | ERDS1FJ100 | C 100HM, J, 1/2W | R1196 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R1145 | ERJ8GCYJ331 | M 3300HM, J, 1/8W | R1197 | ERJ8GCYJ474 | M 470KOHM, J, 1/8W |
| R1146 | ERDS1FJ100 | C 100HM, J, 1/2W | R1198 | ERJ8GCYJ471 | M 4700HM, J, 1/8W |
| R1147 | ERDS1FJ100 | C 100HM, J, 1/2W | R1199 | ERJ8GCYJ564 | C 560KOHM, J, 1/8W |
| R1148 | ERJ8GCYJ331 | M 3300HM, J, 1/8W | R1200 | ERD25FJ100 | C 100HM, J, 1/4W |
| R1149 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W | R1201 | ERD25FJ103 | C 10KOHM, J, 1/4W |
| R1151 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W | R1202 | ERD25TJ393 | C 39KOHM, J, 1/4W |
| R1153 | ERJ8GCYJ123 | M 12KOHM, J, 1/8W | R1203 | ERD25FJ100 | C 100HM, J, 1/4W |
| R1156 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W | R1204 | ERD25TJ182 | C 1.8KOHM, J, 1/4W |
| R1157 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W | R1205 | ERD25TJ330 | C 330HM, J, 1/4W |
| R1159 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W | R1206 | ERD25TJ471 | C 4700HM, J, 1/4W |
| R1160 | ERJ8GCYJ392 | M 3.9KOHM, J, 1/8W | R1207 | ERD25TJ102 | C 1KOHM, J, 1/4W |
| R1161 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R1208 | ERD25TJ471 | C 4700HM, J, 1/4W |
| R1162 | ERJ8GCYJ473 | M 47KOHM, J, 1/8W | R1209 | ERD25TJ102 | C 1KOHM, J, 1/4W |
| R1163 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R1210 | ERD25TJ181 | C 1800HM, J, 1/4W |
| R1164 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W | R1211 | ERD25TJ104 | C 100KOHM, J, 1/4W |
| R1166 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W | R1212 | ERD25TJ103 | C 10KOHM, J, 1/4W |
| R1167 | ERJ8GCYJ104 | M 100KOHM, J, 1/8W | | | |
| R1168 | ERJ8GCYJ101 | M 1000HM, J, 1/8W | R1213 | ERD25TJ474 | C 470KOHM, J, 1/4W |
| R1169 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W | R1214 | ERD25TJ223 | C 22KOHM, J, 1/4W |
| R1170 | ERJ8GCYJ101 | M 1000HM, J, 1/8W | R1215 | ERD25TJ102 | C 1KOHM, J, 1/4W |
| R1171 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W | R1216 | ERD25TJ392 | C 3.9KOHM, J, 1/4W |
| R1172 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R1217 | ERD25FJ223 | C 22KOHM, J, 1/4W |
| R1173 | ERJ8GCYJ622 | M 6.2KOHM, J, 1/8W | | | |
| R1174 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R1218 | ERD25FJ223 | C 22KOHM, J, 1/4W |
| R1175 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W | R1219 | ERD25TJ222 | C 2.2KOHM, J, 1/4W |
| R1176 | ERJ8GCYJ183 | M 18KOHM, J, 1/8W | R1220 | ERD25FJ182 | C 1.8KOHM, J, 1/4W |
| R1177 | ERJ8GCYJ331 | M 3300HM, J, 1/8W | R1221 | ERD25TJ330 | C 330HM, J, 1/4W |

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| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|------------|--------------------|----------|--------------|--------------------|
| R1222 | ERD25TJ102 | C 1KOHM, J, 1/4W | R1266 | ERD25TJ471 | C 4700HM, J, 1/4W |
| R1223 | ERD25TJ223 | C 22KOHM, J, 1/4W | R1267 | ERD25TJ101 | C 1000HM, J, 1/4W |
| R1224 | ERD25TJ562 | C 5.6KOHM, J, 1/4W | R1268 | ERD25TJ101 | C 1000HM, J, 1/4W |
| R1225 | ERD25TJ471 | C 4700HM, J, 1/4W | R1269 | ERD25TJ330 | C 330HM, J, 1/4W |
| R1226 | ERD25TJ102 | C 1KOHM, J, 1/4W | R1290 | ERJ8GCYJ153 | M 15KOHM, J, 1/8W |
| R1227 | ERD25TJ123 | C 12KOHM, J, 1/4W | R1291 | ERJ8GCYJ103 | M 10KOHM, J, 1/8W |
| R1228 | ERD25TJ102 | C 1KOHM, J, 1/4W | R1292 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R1229 | ERD25TJ104 | C 100KOHM, J, 1/4W | R1293 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W |
| R1230 | ERD25TJ272 | C 2.7KOHM, J, 1/4W | R1294 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W |
| R1231 | ERD25TJ272 | C 2.7KOHM, J, 1/4W | R1296 | ERJ8GCYJ223 | M 22KOHM, J, 1/8W |
| | | | R1297 | ERJ8GCYJ563 | M 56KOHM, J, 1/8W |
| R1232 | ERD25TJ102 | C 1KOHM, J, 1/4W | R1299 | ERJ8GCYJ471 | M 4700HM, J, 1/8W |
| R1233 | ERD25TJ561 | C 5600HM, J, 1/4W | ΔR1401 | ERF2AK1R2 | W 1.20HM, K, 2W |
| R1234 | ERD25TJ472 | C 4.7KOHM, J, 1/4W | ΔR1402 | ERDS1FJ392 | C 3.9KOHM, J, 1/2W |
| R1235 | ERD25TJ272 | C 2.7KOHM, J, 1/4W | R1403 | ERDS1FJ101 | C 1000HM, J, 1/2W |
| R1236 | ERD25TJ102 | C 1KOHM, J, 1/4W | R1404 | ERD25FJ101 | C 1000HM, J, 1/4W |
| R1237 | ERD25TJ104 | C 100KOHM, J, 1/4W | R1406 | ERD25FJ681 | C 6800HM, J, 1/4W |
| R1238 | ERD25TJ473 | C 47KOHM, J, 1/4W | R1407 | ERD25FJ271 | C 2700HM, J, 1/4W |
| R1239 | ERD25TJ222 | C 2.2KOHM, J, 1/4W | | | |
| R1240 | ERD25TJ122 | C 1.2KOHM, J, 1/4W | ΔR1409 | ERDS1TJ102 | C 1KOHM, J, 1/2W |
| R1241 | ERD25TJ102 | C 1KOHM, J, 1/4W | ΔR1410 | ERG2ANJ182H | M 1.8KOHM, J, 2W |
| R1242 | ERD25FJ333 | C 33KOHM, J, 1/4W | ΔR1411 | ERD25TJ102 | C 1KOHM, J, 1/4W |
| R1243 | ERD25TJ334 | C 330KOHM, J, 1/4W | ΔR1412 | ERG1ANJ682H | M 6.8KOHM, J, 1W |
| R1244 | ERD25FJ222 | C 2.2KOHM, J, 1/4W | R1413 | ERG3SJ332H | M 3.3KOHM, J, 3W |
| R1245 | ERD25TJ683 | C 68KOHM, J, 1/4W | R1415 | ERX12SJR47P | M 0.470HM, J, 1/2W |
| R1246 | ERD25TJ473 | C 47KOHM, J, 1/4W | R1416 | ERD25TJ332 | C 3.3KOHM, J, 1/4W |
| R1247 | ERD25TJ102 | C 1KOHM, J, 1/4W | ΔR1417 | ERD25FJ471 | C 4700HM, J, 1/4W |
| R1248 | ERD25TJ272 | C 2.7KOHM, J, 1/4W | ΔR1418 | ERO25CKF8202 | M 82KOHM, F, 1/4W |
| R1249 | ERD25TJ393 | C 39KOHM, J, 1/4W | ΔR1419 | EVN38CA00B53 | HV ADJ. 5KOHMB |
| R1250 | ERD25TJ473 | C 47KOHM, J, 1/4W | ΔR1420 | ERO25CKF8061 | M8.06KOHM, F, 1/4W |
| R1251 | ERD25TJ273 | C 27KOHM, J, 1/4W | R1421 | ERD25FJ471 | C 4700HM, J, 1/4W |
| R1252 | ERD25FJ333 | C 33KOHM, J, 1/4W | R1422 | ERDS1TJ393 | C 39KOHM, J, 1/2W |
| R1253 | ERD25TJ333 | C 33KOHM, J, 1/4W | R1426 | ERO25CKF7872 | M78.7KOHM, F, 1/4W |
| R1254 | ERD25FJ101 | C 1000HM, J, 1/4W | R1427 | ERD25TJ223 | C 22KOHM, J, 1/4W |
| R1255 | ERD25TJ102 | C 1KOHM, J, 1/4W | R1428 | ERD25TJ272 | C 2.7KOHM, J, 1/4W |
| R1256 | ERD25TJ101 | C 1000HM, J, 1/4W | R1429 | ERO25CKF1001 | M 1KOHM, F, 1/4W |
| | | | R1430 | ERDS1FJ221 | C 2200HM, J, 1/2W |
| R1257 | ERD25TJ102 | C 1KOHM, J, 1/4W | R1431 | ERD25TJ272 | C 2.7KOHM, J, 1/4W |
| R1258 | ERD25TJ473 | C 47KOHM, J, 1/4W | R1432 | ERG1ANJ823H | M 82KOHM, J, 1W |
| R1259 | ERD25TJ472 | C 4.7KOHM, J, 1/4W | R1433 | ERO50CKG8203 | M 820KOHM, J, 1/2W |
| R1260 | ERD25FJ473 | C 47KOHM, J, 1/4W | R1435 | ERD25TJ182 | C 1.8KOHM, J, 1/4W |
| R1261 | ERD25TJ472 | C 4.7KOHM, J, 1/4W | R1436 | ERD25TJ101 | C 1000HM, J, 1/4W |
| | | | R1501 | ERO25CKG8202 | M 82KOHM, G, 1/4W |
| R1262 | ERD25TJ103 | C 10KOHM, J, 1/4W | R1502 | ERO25CKG1202 | M 1.2KOHM, G, 1/4W |
| R1263 | ERD25FJ103 | C 10KOHM, J, 1/4W | R1503 | ERG1ANJ682H | M 6.8KOHM, J, 1W |
| R1264 | ERD25TJ681 | C 6800HM, J, 1/4W | R1504 | ERG1ANJ682H | M 6.8KOHM, J, 1W |
| R1265 | ERD25TJ471 | C 4700HM, J, 1/4W | R1505 | ERD25TJ563 | C 56KOHM, J, 1/4W |

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|-----------------------|----------|--------------|--------------------|
| R1506 | ERD25TJ681 | C 6800OHM, J, 1/4W | R1603 | ERD25TJ104 | C 100KOHM, J, 1/4W |
| R1507 | ERD25TJ681 | C 6800OHM, J, 1/4W | R1604 | ERD25TJ472 | C 4.7KOHM, J, 1/4W |
| R1508 | ERD25TJ153 | C 15KOHM, J, 1/4W | R1605 | ERD25TJ472 | C 4.7KOHM, J, 1/4W |
| R1509 | ERD25TJ181 | C 1800OHM, J, 1/4W | R1606 | EVN64AAOOB24 | CONTROL 20KOHMB |
| R1510 | ERDS1FJ681 | C 6800OHM, J, 1/2W | R1607 | ERD25TJ103 | C 10KOHM, J, 1/4W |
| R1513 | ERD25TJ102 | C 1KOHM, J, 1/4W | R1608 | ERD25TJ121 | C 1200HM, J, 1/4W |
| R1514 | ERO25CKG8202 | M 82KOHM, G, 1/4W | R1609 | ERD25TJ102 | C 1KOHM, J, 1/4W |
| R1515 | ERO25CKG1202 | M 1.2KOHM, G, 1/4W | R1610 | ERD25TJ471 | C 4700HM, J, 1/4W |
| R1516 | ERG1ANJ682H | M 6.8KOHM, J, 1W | R1611 | ERD25TJ101 | C 1000HM, J, 1/4W |
| R1517 | ERG1ANJ682H | M 6.8KOHM, J, 1W | R1612 | ERD25TJ105 | C 1MOHM, J, 1/4W |
| R1518 | ERD25FJ563 | C 56KOHM, J, 1/4W | R1613 | ERD25TJ105 | C 1MOHM, J, 1/4W |
| R1519 | ERD25TJ681 | C 6800HM, J, 1/4W | R1614 | ERD25TJ103 | C 10KOHM, J, 1/4W |
| R1520 | ERD25TJ681 | C 6800HM, J, 1/4W | R1615 | ERG2ANJ823H | M 82KOHM, J, 2W |
| R1522 | ERD25TJ153 | C 15KOHM, J, 1/4W | R1616 | ERG2ANJ823H | M 82KOHM, J, 2W |
| R1523 | ERD25TJ181 | C 1800HM, J, 1/4W | R1701 | EVN64AAOOB12 | R. DRIVE 1000HMB |
| R1524 | ERDS1FJ681 | C 6800HM, J, 1/2W | R1702 | ERD25TJ560 | C 560HM, J, 1/4W |
| R1525 | ERD25FJ102 | C 1KOHM, J, 1/4W | R1703 | ERD25TJ390 | C 390HM, J, 1/4W |
| R1526 | ERDS1FJ103 | C 10KOHM, J, 1/2W | R1704 | ERD25TJ472 | C 4.7KOHM, J, 1/4W |
| R1528 | ERD25TJ223 | C 22KOHM, J, 1/4W | R1706 | ERG5SJ752H | M 7.5KOHM, J, 5W |
| R1529 | ERD25TJ272 | C 2.7KOHM, J, 1/4W | R1707 | ERDS1TJ153 | C 15KOHM, J, 1/2W |
| R1530 | ERD25TJ103 | C 10KOHM, J, 1/4W | R1710 | ERG5SJ752H | M 7.5KOHM, J, 5W |
| R1531 | ERD25FJ223 | C 22KOHM, J, 1/4W | R1712 | ERDS1TJ151 | C 1500HM, J, 1/2W |
| R1532 | ERD25TJ272 | C 2.7KOHM, J, 1/4W | R1713 | ERD25FJ221 | C 2200HM, J, 1/4W |
| R1533 | ERD25TJ103 | C 10KOHM, J, 1/4W | R1714 | ERX1ANJ1R8H | M 1.80HM, J, 1W |
| R1534 | ERD25TJ272 | C 2.7KOHM, J, 1/4W | R1715 | ERDS1TJ104 | C 100KOHM, J, 1/2W |
| R1535 | ERD25TJ392 | C 3.9KOHM, J, 1/4W | R1716 | ERD25TJ334 | C 330KOHM, J, 1/2W |
| R1536 | EVN38CAOOB24 | RGB H. SIZE 20KOHMB | R1801 | EVN64AAOOB12 | G. DRIVE 1000HMB |
| R1538 | ERD25FJ473 | C 47KOHM, J, 1/4W | R1802 | ERD25TJ270 | C 270HM, J, 1/4W |
| R1539 | ERD25FJ272 | C 2.7KOHM, J, 1/4W | R1803 | ERD25TJ390 | C 390HM, J, 1/4W |
| R1540 | ERD25TJ392 | C 3.9KOHM, J, 1/4W | R1804 | ERD25TJ472 | C 4.7KOHM, J, 1/4W |
| R1541 | EVN38CAOOB24 | VIDEO H. SIZE 20KOHMB | R1806 | ERG5SJ752H | M 7.5KOHM, 5W |
| R1543 | ERDS1FJ103 | C 10KOHM, J, 1/2W | R1807 | ERDS1TJ153 | C 15KOHM, J, 1/2W |
| R1547 | ERG2ANJ220H | M 220HM, J, 2W | R1810 | ERG5SJ752H | M 7.5KOHM, 5W |
| R1551 | ERD25FJ681 | C 6800HM, J, 1/4W | R1812 | ERDS1TJ151 | C 1500HM, J, 1/2W |
| R1552 | ERDS1FJ271 | C 2700HM, J, 1/2W | R1813 | ERD25FJ221 | C 2200HM, J, 1/4W |
| R1553 | ERG3SJ332H | M 3.3KOHM, J, 3W | R1814 | ERX1ANJ1R8H | M 1.80HM, J, 1W |
| △R1554 | ERG2ANJ182H | M 1.8KOHM, J, 2W | R1815 | ERDS1TJ104 | C 100KOHM, J, 1/2W |
| R1556 | ERX12SJR47P | M 0.470HM, J, 1/2W | R1816 | ERD25TJ334 | C 330KOHM, J, 1/4W |
| R1557 | ERG2ANJ391H | M 3900HM, J, 2W | R1901 | EVN64AAOOB12 | B. DRIVE 1000HMB |
| R1558 | ERD25TJ473 | C 47KOHM, J, 1/4W | R1902 | ERD35FJ270 | C 270HM, J, 1/4W |
| R1559 | ERD25FJ562 | C 5.6KOHM, J, 1/4W | R1903 | ERD25TJ390 | C 390HM, J, 1/4W |
| R1560 | ERF2AK1R2 | W 1.20HM, K, 2W | R1904 | ERD25TJ472 | C 4.7KOHM, J, 1/4W |
| R1601 | ERD25TJ153 | C 15KOHM, J, 1/4W | R1906 | ERG5SJ752H | M 7.5KOHM, 5W |
| R1602 | ERD25TJ473 | C 47KOHM, J, 1/4W | R1907 | ERDS1TJ153 | C 15KOHM, J, 1/2W |
| | | | R1910 | ERG5SJ752H | M 7.5KOHM, 5W |
| | | | R1912 | ERDS1TJ151 | C 1500HM, J, 1/2W |
| | | | R1913 | ERD25FJ221 | C 2200HM, J, 1/4W |
| | | | R1914 | ERX1ANJ1R8H | M 1.80HM, J, 1W |
| | | | R1915 | ERDS1TJ104 | C 100KOHM, J, 1/2W |
| | | | R1916 | ERDS25TJ334 | C 330KOHM, J, 1/4W |

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| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|---------------------------------|----------|--------------|------------------------------|
| R3001 | ERO25CKF1502 | M 15KOHM, F, 1/4W | R7030 | ERJ8GCYJ154 | C 150KOHM, J, 1/8W |
| R3002 | EVJFLAEA4B15 | COLOR 100KOHMB | R7031 | ERJ8GCYJ393 | C 39KOHM, J, 1/8W |
| R3003 | ERD25FJ222 | C 2.2KOHM, J, 1/4W | R7032 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W |
| R3004 | ERO25CKF1102 | M 11KOHM, F, 1/4W | R7033 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R3005 | ERD25FJ392 | C 3.9KOHM, J, 1/4W | R7034 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W |
| R3006 | EVJFLAEA4B14 | TINT 10KOHMB | R7035 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R3007 | ERD25FJ392 | C 3.9KOHM, J, 1/4W | R7036 | EVND4AAOOB13 | T/B PIN CORRECTION 1KOHMB |
| R3008 | ERD25FJ103 | C 10KOHM, J, 1/4W | R7037 | ERJ8GCYJ104 | C 100KOHM, J, 1/8W |
| R3009 | EVJFMAEA4B53 | BRIGHTNESS 5KOHMB | R7038 | ERJ8GCYJ102 | M 1KOHM, J, 1/8W |
| R3010 | ERD25FJ822 | C 8.2KOHM, J, 1/4W | R7040 | ERJ8GCYJ101 | M 1000HM, J, 1/8W |
| R3011 | EVJFLAEA4B14 | CONTRAST 10KOHMB | R8001 | EVJFLAEA4B14 | R-V 10KOHMB |
| R3012 | EVJFLAEA4B53 | SHARPNESS 5KOHMB | R8002 | EVJFLAEA4B14 | R-H 10KOHMB |
| R3013 | ERD25FJ473 | C 47KOHM, J, 1/4W | R8003 | EVJFLAEA4B14 | B-V 10KOHMB |
| R3014 | ERD25FJ473 | C 47KOHM, J, 1/4W | R8004 | EVJFLAEA4B14 | B-H 10KOHMB |
| R3015 | ERD25FJ104 | C 100KOHM, J, 1/4W | R8007 | ERDS1FJ151 | C 1500HM, J, 1/2W |
| R3016 | ERD25FJ104 | C 100KOHM, J, 1/4W | R8008 | ERD25FJ182 | C 1.8KOHM, J, 1/4W |
| R3017 | ERD25FJ273 | C 27KOHM, J, 1/4W | R8009 | ERD25FJ332 | C 3.3KOHM, J, 1/4W |
| R3018 | EVJFLAEA4B24 | V. HOLD 20KOHMB | R8010 | ERD25FJ392 | C 3.9KOHM, J, 1/4W |
| R3019 | ERD25FJ222 | C 2.2KOHM, J, 1/4W | R8011 | ERD25FJ392 | C 3.9KOHM, J, 1/4W |
| R3020 | ERD25FJ183 | C 18KOHM, J, 1/4W | R8012 | ERD25FJ392 | C 3.9KOHM, J, 1/4W |
| R3021 | ERD25FJ472 | C 4.7KOHM, J, 1/4W | R8013 | ERD25FJ562 | C 5.6KOHM, J, 1/4W |
| R7005 | EVND4H00GB24 | G STATIC CONVERGENCE 20KOHMB | R8014 | ERD25FJ183 | C 18KOHM, J, 1/4W |
| R7006 | EVND4H00GB24 | G STATIC CONVERGENCE 20KOHMB | R8015 | ERD25FJ183 | C 18KOHM, J, 1/4W |
| R7008 | ERDS1FJ151 | C 1500HM, J, 1/2W | R8016 | ERD25FJ183 | C 18KOHM, J, 1/4W |
| R7009 | ERDS1FJ151 | C 1500HM, J, 1/2W | R8017 | ERD25FJ183 | C 18KOHM, J, 1/4W |
| R7010 | ERDS1FJ151 | C 1500HM, J, 1/2W | ΔR9001 | ERF20HMK3R3 | W 3.30HM, 20W |
| R7011 | EVND4H00GB24 | H/L PIN. 20KOHMB | ΔR9005 | ERG2ANJ104H | M 100KOHM, J, 2W |
| R7012 | EVND4H00RB24 | B-H CONVERGENCE 20KOHMB | R9006 | ERD25FJ222 | C 2.2KOHM, J, 1/4W |
| R7013 | EVND4H00BB24 | CONVERGENCE 20KOHMB | ΔR9007 | ERG2SJ102H | M 1KOHM, J, 2W |
| R7014 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W | R9008 | ERG3SJ822H | M 8.2KOHM, J, 3W |
| R7015 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W | R9009 | ERD25FJ392 | C 3.9KOHM, J, 1/4W |
| R7016 | ERJ8GCYJ101 | M 1000HM, J, 1/8W | R9010 | ERD25FJ472 | C 4.7KOHM, J, 1/4W |
| R7017 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R9011 | ERD25FJ101 | C 1000HM, J, 1/4W |
| R7018 | ERJ8GCYJ222 | M 2.2KOHM, J, 1/8W | R9012 | ERD50FJ104 | C 100KOHM, J, 1/2W |
| R7019 | ERJ8GCYJ472 | M 4.7KOHM, J, 1/8W | R9013 | ERD25FJ101 | C 1000HM, J, 1/4W |
| R7020 | ERJ8GCYJ394 | C 390KOHM, J, 1/8W | R9014 | ERD50TJ104 | C 100KOHM, J, 1/4W |
| R7021 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W | R9015 | ERD25FJ221 | C 2200HM, J, 1/4W |
| R7022 | ERJ8GCYJ103 | M 1OKOHM, J, 1/8W | R9016 | ERD25FJ221 | C 2200HM, J, 1/4W |
| R7023 | EVND4H00RB24 | R-H CONVERGENCE 20KOHMB | R9101 | ERD25FJ823 | C 82KOHM, J, 1/4W |
| R7024 | EVND4H00BB24 | B-H CONVERGENCE 20KOHMB | R9102 | ERG1SJ331P | M 3300HM, J, 1W |
| R7025 | ERDS1FJ101 | C 1000HM, J, 1/2W | R9103 | ERD25FJ100 | C 100HM, J, 1/4W |
| R7027 | ERJ8GCYJ101 | M 1000HM, J, 1/8W | R9104 | ERD25TJ681 | C 6800HM, J, 1/4W |
| R7028 | ERJ8GCYJ101 | M 1000HM, J, 1/8W | R9203 | ERD25FJ121 | C 1200HM, J, 1/4W |
| R7029 | ERJ8GCYJ682' | M 6.8KOHM, J, 1/8W | R9204 | ERF2AKR68 | W 0.680HM, K, 2W |
| | | | R9205 | ERG2SJ333H | M 33KOHM, J, 2W |
| | | | R9206 | ERDS1FJ120 | C 120HM, J, 1/2W |
| | | | R9207 | ERG2SJ333H | M 33KOHM, J, 2W |

| Ref. No. | Part No. | Description | | Ref. No. | Part No. | Description | |
|------------|--------------|-------------|------------------|----------|--------------|-------------|----------------|
| △R9208 | ERD75TAJ825 | C | 8.2MOHM, K, 1/2W | C27 | ECEA1CU330 | E | 33UF, 16V |
| R9209 | ERD25FJ393 | C | 39KOHM, J, 1/4W | C28 | ECEA1CU330 | E | 33UF, 16V |
| R9210 | ERD25TJ104 | C | 100KOHM, J, 1/4W | C29 | ECEA1CU330 | E | 33UF, 16V |
| △R9212 | ERQ12HKR27 | F | 0.270HM, K, 1/2W | C30 | ECEA1CU330 | E | 33UF, 16V |
| △R9213 | ERQ12HKR56P | F | 0.560HM, K, 1/2W | C31 | ECEA1CU101 | E | 100UF, 16V |
| △R9214 | ERQ12HKR22 | F | 0.220HM, K, 1/2W | C32 | ECEA1CU101 | E | 100UF, 16V |
| △R9215 | ERQ12HKR22 | F | 0.220HM, K, 1/2W | C33 | ECQM1H154KV | P | 0.15UF, K, 50V |
| △R9216 | ERQ12HKR27 | F | 0.270HM, K, 1/2W | C34 | ECQM1H154KV | P | 0.15UF, K, 50V |
| R9218 | ERDS1TJ473 | C | 47KOHM, J, 1/2W | C35 | ECQM1H154KV | P | 0.15UF, K, 50V |
| R9303 | ERD25FJ101 | C | 2200HM, J, 1/4W | C36 | ECUX1H120JCM | C | 12PF, J, 50V |
| R9304 | ERD2AKR68 | W | 0.680HM, K, 2W | C37 | ECUX1H120JCM | C | 12PF, J, 50V |
| R9305 | ERG2SJ333H | M | 33KOHM, J, 2W | C38 | ECUX1H120JCM | C | 12PF, J, 50V |
| △R9307 | ERD25FJ121 | C | 1200HM, J, 1/4W | C39 | ECUX1H103KBM | C | 0.01UF, K, 50V |
| R9308 | ERD25FJ393 | C | 39KOHM, J, 1/4W | C40 | ECUX1H103KBM | C | 0.01UF, K, 50V |
| R9309 | ERD25TJ104 | C | 100KOHM, J, 1/4W | C41 | ECUX1H103KBM | C | 0.01UF, K, 50V |
| R9310 | ERG2SJ333H | M | 33KOHM, J, 2W | C42 | ECEA1CU220 | E | 22UF, 16V |
| △R9311 | ERD25FJ100 | C | 100HM, J, 1/4W | C43 | ECEA1CU470 | E | 47UF, 16V |
| R9313 | ERDS1TJ473 | C | 47KOHM, J, 1/2W | C44 | ECUX1H270JCM | C | 27PF, J, 50V |
| R9401 | ERDS1FJ121 | C | 1200HM, J, 1/2W | C45 | ECUX1H270JCM | C | 27PF, J, 50V |
| R9402 | ERG3ANJ220H | | | C46 | ECUX1H270JCM | C | 27PF, J, 50V |
| R9403 | ERDS1FJ820 | C | 820HM, J, 1/2W | C47 | ECEA1CN220S | E | 22UF, 16V |
| R9404 | ERG3SJ220H | M | 220HM, J, 3W | C48 | ECEA1CN220S | E | 22UF, 16V |
| R9405 | ERD25FJ221 | C | 2200HM, J, 1/4W | C49 | ECEA1CN220S | E | 22UF, 16V |
| R9406 | ERG3SJ100 | M | 100HM, J, 3W | C51 | ECUX1H103KBM | C | 0.01UF, K, 50V |
| R9407 | ERD25FJ221 | C | 2200HM, J, 1/4W | C53 | ECUX1H103KBM | C | 0.01UF, K, 50V |
| R9408 | ERDS1FJ390 | C | 390HM, J, 1/2W | C55 | ECUX1H103KBM | C | 0.01UF, K, 50V |
| △R9501 | ERC12ZGK105 | S | 1MOHM, J, 1/2W | C56 | ECEA1CN330S | E | 33UF, 16V |
| CAPACITORS | | | | C57 | ECEA1CN330S | E | 33UF, 16V |
| C9 | ECEA1CU470 | E | 47UF, 16V | C58 | ECEA1CN330S | E | 33UF, 16V |
| C10 | ECEA1CN330S | E | 33UF, 16V | C59 | ECEA1EN100S | E | 10UF, 25V |
| C11 | ECEA1CN330S | E | 33UF, 16V | C60 | ECQM1H104KV | P | 0.1UF, K, 50V |
| C12 | ECEA1CN330S | E | 33UF, 16V | C61 | ECEA1HNO10S | E | 1UF, 50V |
| C16 | ECEA1CU330 | E | 33UF, 16V | C62 | ECEA1HNO10S | E | 1UF, 50V |
| C17 | ECEA1CU330 | E | 33UF, 16V | C63 | ECEA1CN100S | E | 10UF, 16V |
| C18 | ECEA1CU330 | E | 33UF, 16V | C64 | ECEA1HN3R3S | E | 3.3UF, 50V |
| C19 | ECUX1H120JCM | C | 12PF, J, 50V | C65 | ECEA1CN330S | E | 33UF, 16V |
| C20 | ECUX1H120JCM | C | 12PF, J, 50V | C66 | ECEA1VU4R7 | E | 4.7UF, 35V |
| C21 | ECUX1H120JCM | C | 12PF, J, 50V | C67 | ECUX1H390JCM | C | 39PF, J, 50V |
| C22 | ECEA1CU330 | E | 33UF, 16V | C68 | ECUX1H471JCM | C | 470PF, J, 50V |
| C23 | ECEA1CU330 | E | 33UF, 16V | C69 | ECEA1CU470 | E | 47UF, 16V |
| C24 | ECEA1CU330 | E | 33UF, 16V | C70 | ECEA1CU330 | E | 33UF, 16V |
| C25 | ECEA1CU330 | E | 33UF, 16V | C71 | ECEA1CU100 | E | 10UF, 16V |
| C26 | ECEA1CU470 | E | 47UF, 16V | C72 | ECEA1HU3R3 | E | 3.3UF, 50V |
| | | | | C73 | ECEA1HU3R3 | E | 3.3UF, 50V |

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| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|-------------------|----------|--------------|-------------------|
| C74 | ECEA1HU3R3 | E 3.3UF, 50V | C305 | ECEA1EU221 | E 220PF, 25V |
| C75 | ECQM1H333JV | P 0.033UF, J, 50V | C306 | ECEA1CU101 | E 100UF, 16V |
| C76 | ECUX1H471JCM | C 470PF, J, 50V | C307 | ECEA1CU101 | E 100UF, 16V |
| C77 | ECEA1HU010 | E 1UF, 50V | C308 | ECEA1HU100 | E 10UF, 50V |
| C78 | ECEA1HU010 | E 1UF, 50V | C309 | ECEA1HU100 | E 10UF, 50V |
| C80 | ECUX1H223KBM | C 0.023UF, K, 50V | C311 | ECUX1H103KBM | C 0.01UF, K, 50V |
| C81 | ECUX1H221KBM | C 220PF, K, 50V | C312 | ECEA1CU101 | E 100UF, 16V |
| C82 | ECEA1AU101 | E 100UF, 10V | C313 | ECUX1H103KBM | C 0.01UF, K, 50V |
| C83 | ECUX1H680JCM | C 68PF, J, 50V | C315 | ECEA1CN100S | E 10UF, 16V |
| C84 | ECUX1H680JCM | C 68PF, J, 50V | C316 | ECEA1HU010 | E 1UF, 50V |
| C85 | ECUX1H150JCM | C 15PF, J, 50V | C317 | ECEA1CN100S | E 10UF, 16V |
| C86 | ECUX1H221KBM | C 220PF, K, 50V | C318 | ECEA1HU100 | E 10UF, 50V |
| C87 | ECEA1CN330S | E 33UF, 16V | C319 | ECEA1HU100 | E 10UF, 50V |
| C88 | ECUX1H103KBM | C 0.01UF, K, 50V | C320 | ECUX1H560JCM | C 56PF, J, 50V |
| C89 | ECEA1AU101 | E 100UF, 10V | C321 | ECEA1HU3R3 | E 3.3UF, 50V |
| C90 | ECUX1H222KBM | C 2200PF, K, 50V | C322 | ECUX1H103KBM | C 0.01UF, K, 50V |
| C91 | ECQM1H334JV | P 0.33UF, J, 50V | C324 | ECEA1CU330 | E 33UF, 16V |
| C92 | ECUX1H220JCM | C 22PF, J, 50V | C326 | ECUX1H103KBM | C 0.01UF, K, 50V |
| C93 | ECUX1H472KBM | C 4700PF, K, 50V | C328 | ECEA1CU330 | E 33UF, 16V |
| C94 | ECUX1H222KBM | C 2200PF, K, 50V | C330 | ECUX1H103KBM | C 0.01UF, K, 50V |
| C95 | ECUX1H681JCM | C 680PF, J, 50V | C332 | ECEA1CU330 | E 33UF, 16V |
| C96 | ECEA1HU2R2 | E 2.2UF, 50V | C334 | ECUX1H103KBM | C 0.01UF, K, 50V |
| C97 | ECQM1H683KV | P 0.068UF, K, 50V | C335 | ECUX1H220JCM | E 22PF, 50V |
| C98 | ECQM1H473KV | P 0.047UF, K, 50V | C336 | ECUX1H271JCM | C 270PF, J, 50V |
| C99 | ECUX1H680JCM | C 68PF, J, 50V | C337 | ECUX1H820JCM | C 82PF, J, 50V |
| C201 | ECUX1H102KBM | C 1000PF, K, 50V | C341 | ECEA1CN220S | E 22UF, 16V |
| C202 | ECEA1EU470 | E 47UF, 25V | C342 | ECUX1H103KBM | C 0.01UF, K, 50V |
| C203 | ECEA1EU101 | E 100UF, 25V | C350 | ECEA1CU331 | E 330UF, 16V |
| C204 | ECEA1EU470 | E 47UF, 25V | C403 | ECEA1CU100 | E 10UF, 16V |
| C205 | ECUX1H102KBM | C 1000PF, K, 50V | C404 | ECEA50ZR68 | E 0.68UF, 50V |
| C206 | ECUX1H102KBM | C 1000PF, K, 50V | C405 | ECKF1H681KB | C 680PF, K, 50V |
| C207 | ECEA1EU470 | E 47UF, 25V | C406 | ECQM1H393KV | P 0.039UF, K, 50V |
| C209 | ECEA1EU101 | E 100UF, 25V | C407 | ECSZ16EF2R2V | T 2.2UF, 16V |
| C210 | ECUX1H102KBM | C 1000PF, K, 50V | C408 | ECQM1H222KV | P 2200PF, K, 50V |
| C211 | ECEA1EU470 | E 47UF, 25V | C409 | ECEA1EU331 | E 330UF, 25V |
| C212 | ECEA1EU101 | E 100UF, 25V | C410 | ECEA1EU101 | E 100UF, 25V |
| C213 | ECEA1EU470 | E 47UF, 25V | C411 | ECEA1VU330 | E 33UF, 35V |
| C214 | ECUX1H102KBM | C 1000PF, K, 50V | C412 | ECSZ25EF4R7N | T 4.7UF, 25V |
| C215 | ECEA1EU101 | E 100UF, 25V | C413 | ECEA50Z4R7 | E 4.7UF, 50V |
| C216 | ECUX1H102KBM | C 1000PF, K, 50V | C414 | ECEA1VU4R7 | E 4.7UF, 35V |
| C217 | ECEA1EU470 | E 47UF, 25V | C415 | ECSZ25EF3R3N | T 3.3UF, 25V |
| C301 | ECEA1CN330S | E 33UF, 16V | C416 | ECSZ25EF2R2N | T 2.2UF, 25V |
| C302 | ECEA1CN330S | E 33UF, 16V | C417 | ECEA1CU101 | E 100UF, 16V |
| C303 | ECEA1CN220S | E 22UF, 16V | C418 | ECQM1H104KV | P 0.1UF, K, 50V |

| Ref. No. | Part No. | Description | | | Ref. No. | Part No. | Description | | |
|----------|--------------|-------------|----------|---------|----------|--------------|-------------|----------|--------|
| C451 | ECEA2CG4R7S | E | 4.7UF, | 160V | C604 | ECUX1H101JCM | C | 100PF, | J, 50V |
| C452 | ECEA1HU4R7 | E | 4.7UF, | 50V | C605 | ECUX1H150JCM | C | 15PF, | J, 50V |
| C453 | ECEA50ZR22 | E | 0.22UF, | 50V | C606 | ECUX1H151JCM | C | 150PF, | J, 50V |
| C454 | ECEA2AU331 | E | 330UF, | 100V | C607 | ECUX1H103KBM | C | 0.01UF, | K, 50V |
| C455 | ECEA2CS330 | E | 33UF, | 160V | C608 | ECQM1H272JV | P | 2700PF, | J, 50V |
| C456 | ECKD2H103PE2 | C | 0.01UF, | P, 500V | C609 | ECUX1H103KBM | C | 0.01UF, | K, 50V |
| C457 | ECEA1EN4R7S | E | 4.7UF, | 25V | C610 | ECUX1H330JCM | C | 33PF, | J, 50V |
| C458 | ECQE2474KZ | P | 0.47UF, | K, 250V | C611 | ECUX1H470JCM | C | 47PF, | J, 50V |
| C481 | ECEA1CN100S | E | 10UF, | 16V | C612 | ECUX1H100DCM | C | 10PF, | D, 50V |
| C482 | ECEA1CU470 | E | 47UF, | 16V | C613 | TCRHA070G11 | | TRIMMER | |
| C483 | ECKF1H102KB | C | 1000PF, | K, 50V | C614 | ECEA50ZR15 | E | 0.15UF, | 50V |
| C484 | ECKF1H102KB | C | 1000PF, | K, 50V | C615 | ECQM1H822KV | P | 8200PF, | K, 50V |
| C485 | ECEA1HN010S | E | 1UF, | 50V | C616 | ECEA1EN3R3S | E | 3.3UF, | 25V |
| C486 | ECEA1EN100S | E | 10UF, | 25V | C617 | ECUX1H102KBM | C | 1000PF, | K, 50V |
| C503 | ECQM1H104KV | P | 0.1UF, | K, 50V | C618 | ECUX1H060DCM | C | 6PF, | D, 50V |
| C504 | ECQM1H223KV | P | 0.022UF, | K, 50V | C619 | ECUX1H221KBM | C | 220PF, | K, 50V |
| C505 | ECEA1HU3R3 | E | 3.3UF, | 50V | C620 | ECUX1H680JCM | C | 68PF, | J, 50V |
| C506 | ECQM1H103KV | P | 0.01UF, | K, 50V | C621 | ECQM1H273KV | P | 0.027UF, | K, 50V |
| C511 | ECQF6182KZ | P | 1800PF, | K, 600V | C622 | ECUX1H221KBM | C | 220PF, | K, 50V |
| C512 | ECQM1H682KV | P | 6800PF, | K, 50V | C623 | ECUX1H103KBM | C | 0.01UF, | K, 50V |
| C513 | ECEA1CU100 | E | 10UF, | 16V | C624 | ECEA1HUR47 | E | 0.47UF, | 50V |
| C514 | ECEA1CU470 | E | 47UF, | 16V | C625 | ECUX1H103KBM | C | 0.01UF, | K, 50V |
| C515 | ECEA1CU220 | E | 22UF, | 16V | C626 | ECEA1CU101 | E | 100UF, | 16V |
| C516 | ECEA1CN100S | E | 10UF, | 16V | C627 | ECUX1H821JCM | C | 820PF, | J, 50V |
| C517 | ECEA25Z3R3 | E | 3.3UF, | 25V | C628 | ECEA1HU4R7 | E | 4.7UF, | 50V |
| △C518 | ECEA1HU010 | E | 1UF, | 50V | C629 | ECQM1H104KV | P | 0.1UF, | K, 50V |
| C519 | ECUX1H103KBM | C | 0.01UF, | K, 50V | C630 | ECEA1HU010 | E | 1UF, | 50V |
| C520 | ECUX1H103KBM | C | 0.01UF, | K, 50V | C631 | ECUX1H121JCM | C | 120PF, | J, 50V |
| C551 | ECEA1CN100S | E | 10UF, | 16V | C632 | ECUX1H180JCM | C | 18PF, | J, 50V |
| C552 | ECKF1H102KB | C | 1000PF, | K, 50V | C633 | ECUX1H221JCM | C | 220PF, | J, 50V |
| C553 | ECKF1H102KB | C | 1000PF, | K, 50V | C634 | ECQM1H103KV | P | 0.01UF, | K, 50V |
| C554 | ECKF1H103ZF | C | 0.01UF, | Z, 50V | C635 | ECUX1H103KBM | C | 0.01UF, | K, 50V |
| C555 | ECEA1CU100 | E | 10UF, | 16V | C636 | ECUX1H101JCM | C | 100PF, | J, 50V |
| C556 | ECQM1H272JV | P | 2700PF, | J, 50V | C637 | ECSZ16EF33V | T | 33UF, | 16V |
| C558 | ECKF1H562KB | C | 5600PF, | K, 50V | C638 | ECQM1H104KV | P | 0.1UF, | K, 50V |
| C559 | ECEA1CU100 | E | 10UF, | 16V | C639 | ECUX1H331JCM | C | 330PF, | J, 50V |
| C560 | ECEA1CU220 | E | 22UF, | 16V | C640 | ECEA1HU100 | E | 10UF, | 50V |
| C561 | ECEA1CU100 | E | 10UF, | 16V | C641 | ECUX1H103KBM | C | 0.01UF, | K, 50V |
| C562 | ECEA1CU220 | E | 22UF, | 16V | C642 | EVUX1H220JCM | C | 22PF, | 50V |
| C563 | ECEA1CN100S | E | 10UF, | 16V | C643 | ECUX1H331KBM | C | 330PF, | K, 50V |
| C564 | ECQM1H392JV | P | 3900PF, | J, 50V | C644 | ECUX1H821KBM | C | 820PF, | K, 50V |
| C601 | ECUX1H470JCM | C | 47PF, | J, 50V | C645 | ECUX1H331KBM | C | 330PF, | K, 50V |
| C602 | ECUX1H330JCM | C | 33PF, | J, 50V | C646 | ECEA1HU4R7 | E | 4.7UF, | 50V |
| C603 | ECUX1H470JCM | C | 47PF, | J, 50V | C647 | ECEA1HU010 | E | 1UF, | 50V |
| | | | | | C648 | EVUX1H220JCM | E | 22PF, | 50V |

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| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|-------------------|----------|--------------|-------------------|
| C649 | ECUX1H221KBM | C 220PF, K, 50V | C732 | ECCF1H150J | C 15PF, J, 50V |
| C650 | ECQM1H103KV | P 0.01UF, K, 50V | C733 | ECEA1CU100 | E 10UF, 16V |
| C651 | ECQM1H103KV | P 0.01UF, K, 50V | C735 | ECEA1CU100 | E 10UF, 16V |
| C652 | ECUX1H121JCM | C 120PF, J, 50V | C736 | ECQM1H473KV | P 0.047UF, K, 50V |
| C653 | ECUX1H103KBM | C 0.01UF, K, 50V | C738 | ECQM1H473KV | P 0.047UF, K, 50V |
| C654 | ECQM1H474KV | P 0.47UF, K, 50V | C739 | ECEAOJU101 | E 100UF, 6.3V |
| C655 | ECUX1H102KBM | C 1000PF, K, 50V | C740 | ECEA1CU100 | E 10UF, 16V |
| C656 | ECUX1H121JCM | C 120PF, J, 50V | C741 | ECEA1CU100 | E 10UF, 16V |
| C657 | ECUX1H331KBM | C 330PF, K, 50V | C744 | ECEA1CN100S | E 10UF, 16V |
| C658 | ECUX1H103KBM | C 0.01UF, K, 50V | C745 | ECEA1CU100 | E 10UF, 16V |
| C671 | ECEA1HU100 | E 10UF, 50V | C746 | ECEA1CU100 | E 10UF, 16V |
| C672 | ECQM1H103KV | P 0.01UF, K, 50V | C747 | ECEA1CU101 | E 100UF, 16V |
| C673 | ECEA1HU3R3 | E 3.3UF, 50V | C748 | ECEA1HU010 | E 1UF, 50V |
| C674 | ECUX1H103KBM | C 0.01UF, K, 50V | C749 | ECEAOJU470 | E 47UF, 6.3V |
| C675 | ECQM1H183KV | P 0.018UF, K, 50V | C751 | ECEAOJU470 | E 47UF, 6.3V |
| C676 | ECQM1H393KV | P 0.039UF, K, 50V | C752 | ECEA1CU100 | E 10UF, 16V |
| C677 | ECQM1H473KV | P 0.047UF, K, 50V | C755 | ECEA1CN470S | E 47UF, 16V |
| C678 | ECEA1CU330 | E 33UF, 16V | C756 | ECEA1HU010 | E 1UF, 50V |
| C679 | ECEA1CU330 | E 33UF, 16V | C757 | ECEA1EN3R3S | E 3.3UF, 25V |
| C680 | ECEA1CU330 | E 33UF, 16V | C758 | ECEA1EN3R3S | E 3.3UF, 25V |
| C701 | ECEA1VU220 | E 22UF, 35V | C762 | ECEA1CN100S | E 10UF, 16V |
| C703 | ECEA1HN01OS | E 1UF, 50V | C763 | ECQM1H104KV | P 0.1UF, K, 50V |
| C704 | ECEA1VU220 | E 22UF, 35V | C764 | ECEA1CU470 | E 47UF, 16V |
| C705 | ECEA1VU101 | E 100UF, 35V | C765 | ECUX1H561KBM | C 560PF, K, 50V |
| C706 | ECQM1H104KV | P 0.1UF, K, 50V | C766 | ECEA1HN01OS | E 1UF, 50V |
| C707 | ECEA1HU010 | E 1UF, 50V | C767 | ECQM1H103KV | P 0.01UF, K, 50V |
| C708 | ECQM1H333KV | P 0.033UF, K, 50V | C768 | ECQM1H102KV | P 1000PF, K, 50V |
| C709 | ECEA1HU010 | E 1UF, 50V | C769 | ECEA1VU100 | E 10UF, 35V |
| C710 | ECEA1HN01OS | E 1UF, 50V | C770 | ECQM1H104KV | P 0.1UF, K, 50V |
| C711 | ECCF1H680J | C 68PF, J, 50V | C771 | ECEA1HN2R2S | E 2.2UF, 50V |
| C712 | ECEA1HN01OS | E 1UF, 50V | C981 | ECEA1VU220 | E 22UF, 35V |
| C716 | ECEA1HU010 | E 1UF, 50V | C982 | ECEA1CU220 | E 22UF, 16V |
| C717 | ECEA1EU100 | E 10UF, 25V | C983 | ECEA1CU100 | E 10UF, 16V |
| C718 | ECEA1HU010 | E 1UF, 50V | C984 | ECEA1CU220 | E 22UF, 16V |
| C719 | ECQM1H104KV | P 0.1UF, K, 50V | C985 | ECEA1VU100 | E 10UF, 35V |
| C720 | ECEA1HN01OS | E 1UF, 50V | C986 | ECEA1VU100 | E 10UF, 35V |
| C721 | ECQM1H104KV | P 0.1UF, K, 50V | C987 | ECEA1EU470 | E 47UF, 25V |
| C722 | ECEA1HU010 | E 1UF, 50V | C988 | ECEA1EU470 | E 47UF, 25V |
| C723 | ECEA1CU100 | E 10UF, 16V | C989 | ECEA1HU010 | E 1UF, 50V |
| C724 | ECQM1H104KV | P 0.1UF, K, 50V | C990 | ECEA1HU010 | E 1UF, 50V |
| C725 | ECEA1CU101 | E 100UF, 16V | C991 | ECEA1HU010 | E 1UF, 50V |
| C726 | ECEA1HU010 | E 1UF, 50V | C992 | ECEA1CN100S | E 10UF, 16V |
| C727 | ECEA1HU010 | E 1UF, 50V | C993 | ECEA1CN100S | E 10UF, 16V |
| C730 | ECQM1H473KV | P 0.047UF, K, 50V | C994 | ECEA1CU100 | E 10UF, 16V |
| C731 | ECEA1EU221 | E 220PF, 25V | | | |

| Ref. No. | Part No. | Description | | | Ref. No. | Part No. | Description | | |
|----------|--------------|-------------|-----------------|------|----------|--------------|-------------|--------------------|------|
| C1001 | ECEA1CU100 | E | 10UF, | 16V | C1418 | ECQE12683KZ | P | 0.068UF , K, 1.2KV | |
| C1004 | ECEA1CU101 | E | 100UF, | 16V | C1420 | ECEA1VU101 | E | 100UF, | 35V |
| C1005 | ECEA1CU101 | E | 100UF, | 16V | C1501 | ECEA1CN330S | E | 33UF, | 16V |
| C1006 | ECEA1AU101 | E | 100UF, | 10V | C1502 | ECQM1H333KV | P | 0.033UF, K, 50V | |
| C1007 | ECEA1CU101 | E | 100UF, | 16V | C1503 | ECEA1VU220 | E | 22UF, | 35V |
| | | | | | C1504 | ECEA1CU331 | E | 330UF, | 16V |
| C1008 | ECEA1EU470 | E | 47UF, | 25V | | | | | |
| C1010 | ECKF1H103ZF | C | 0.01UF, Z, | 50V | C1505 | ECQM1H333KV | P | 0.033UF, K, 50V | |
| C1011 | ECEA2ES100 | E | 10UF, | 250V | C1506 | ECEA1HU100 | E | 10UF, | 50V |
| C1012 | ECEA1CU100 | E | 10UF, | 16V | C1507 | ECEA1CN100S | E | 10UF, | 16V |
| C1013 | ECEA1CU330 | E | 33UF, | 16V | C1508 | ECQM1H333KV | P | 0.033UF, K, 50V | |
| | | | | | C1509 | ECQM1H333KV | P | 0.033UF, K, 50V | |
| C1201 | ECEA1CN330S | E | 33UF, | 16V | | | | | |
| C1202 | ECEA1CN220S | E | 22UF, | 16V | C1510 | ECEA1VU220 | E | 22UF, | 35V |
| C1203 | ECEA1HNO10S | E | 1UF, | 50V | C1511 | ECEA1CU331 | E | 330UF, | 16V |
| C1204 | ECEA1HUO10 | E | 1UF, | 50V | C1512 | ECEA1HU4R7 | E | 4.7UF, | 50V |
| | | | | | C1513 | ECKF1H103ZF | C | 0.01UF, Z, | 50V |
| C1205 | ECEA1CN100S | E | 10UF, | 16V | C1514 | ECKF1H103ZF | C | 0.01UF, Z, | 50V |
| C1206 | ECEA1HU4R7 | E | 4.7UF, | 50V | C1515 | ECEA2CS100 | E | 10UF, | 160V |
| C1207 | ECEA1CU101 | E | 100UF, | 16V | C1516 | ECEA2CS3R3 | E | 3.3UF, | 160V |
| C1208 | ECEA1CU470 | E | 47UF, | 16V | C1517 | ECEA2CS330 | E | 33UF, | 160V |
| C1209 | ECEA1EN4R7S | E | 4.7UF, | 25V | C1518 | ECEA2CS100 | E | 10UF, | 160V |
| | | | | | | | | | |
| C1210 | ECEA1CU470 | E | 47UF, | 16V | C1519 | ECEA2CS3R3 | E | 3.3UF, | 160V |
| C1211 | ECCF1H121JP | C | 120PF, J, | 50V | C1521 | ECQE2105KS | P | 1UF, K, 250V | |
| C1212 | ECEA1CN220S | E | 22UF, | 16V | C1522 | ECEAOJU222 | E | 2200UF, | 6.3V |
| C1213 | ECEA1CN330S | E | 33UF, | 16V | C1523 | ECQV1H474JZ | P | 0.47UF, J, 50V | |
| C1214 | ECEA1CN330S | E | 33UF, | 16V | C1524 | ECQM1H333KV | P | 0.033UF, K, 50V | |
| | | | | | | | | | |
| C1215 | ECEA1HNO10S | E | 1UF, | 50V | C1551 | ECKD2H182KB2 | C | 1800PF, K, 500V | |
| C1216 | ECEA1CU101 | E | 100UF, | 16V | C1552 | ECKD3D222JBN | C | 2200PF, J, 2KV | |
| C1217 | ECKF1H103ZF | C | 0.01UF, Z, | 50V | C1553 | ECQM1H273KV | P | 0.027UF, K, 50V | |
| C1282 | ECUX1H681JCM | C | 680PF, J, | 50V | C1555 | ECWH12H682JS | P | 6800PF, J, 1.2KV | |
| C1401 | ECES2CV221S | E | 220UF, | 160V | C1556 | ECQE2105KS | P | 1UF, K, 250V | |
| | | | | | | | | | |
| C1402 | ECEA1VU102 | E | 1000UF, | 35V | C1557 | ECQE2105KS | P | 1UF, K, 250V | |
| C1403 | ECKD2H182KB2 | C | 1800PF, K, 500V | | C1558 | ECQM1H273KV | P | 0.027UF, K, 50V | |
| C1404 | ECEA1CU102 | E | 1000UF, | 16V | C1559 | ECEA1HU100 | E | 10UF, | 50V |
| C1405 | ECQE2475KS | P | 4.7UF, K, 250V | | C1560 | ECKF1H152KB | C | 1500PF, K, 50V | |
| C1406 | ECEA1VU4R7 | E | 4.7UF, | 35V | C1561 | ECEA1HU100 | E | 10UF, | 50V |
| | | | | | | | | | |
| C1407 | ECKF1H472ZF | C | 4700PF, Z, | 50V | C1562 | ECQM1104KZ | P | 0.1UF, K, 100V | |
| C1408 | ECQE2104KS | P | 0.1UF, K, 250V | | C1601 | ECEA1EN100S | E | 10UF, | 25V |
| C1409 | ECKD2H151KB2 | C | 150PF, K, 500V | | C1602 | ECEA1VU100 | E | 10UF, | 35V |
| C1411 | ECEA1HUR47 | E | 0.47UF, | 50V | C1603 | ECEA1EN100S | E | 10UF, | 25V |
| C1412 | ECQE2474MS | P | 0.47UF, M, | 250V | C1604 | ECEA1EU220 | E | 22UF, | 25V |
| | | | | | | | | | |
| C1413 | ECEA2ES4R7 | E | 4.7UF, | 250V | C1701 | ECKF1H103ZF | C | 0.01UF, Z, | 50V |
| △C1414 | ECKD3D222JBN | C | 2200PF, J, | 2KV | C1702 | ECCF1H471J | C | 470PF, J, | 50V |
| △C1415 | ECKD3D222JBN | C | 2200PF, J, | 2KV | C1703 | ECCF1H561J | C | 560PF, J, | 50V |
| △C1416 | ECKD3D222JBN | C | 2200PF, J, | 2KV | C1704 | ECKD2H103MD2 | C | 0.01UF, M, | 500V |
| C1417 | ECQE10683KU | P | 0.068UF, K, | 1KV | C1705 | ECKD3D222JBN | C | 2200PF, J, | 2KV |

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|--------------------|----------|--------------|--------------------|
| C1707 | ECEA2ES010 | E 1UF, 250V | C9223 | ECEA1CU222 | E 2200UF, 16V |
| C1801 | ECKF1H103ZF | C 0.01UF, Z, 50V | ΔC9224 | ECEA2CS101 | E 100UF, 160V |
| C1802 | ECCF1H471J | C 470PF, J, 50V | C9225 | ECKD2H472PE8 | C 4700PF, P, 500V |
| C1803 | ECCF1H561J | C 560PF, J, 50V | C9226 | ECKF1H101KB | C 100PF, K, 50V |
| C1804 | ECKD2H103MD2 | C 0.01UF, M, 500V | C9227 | ECEA1CU222 | E 2200UF, 16V |
| C1805 | ECKD3D222JBN | C 2200PF, J, 2KV | C9228 | ECKF1H472KB | C 4700PF, K, 50V |
| C1807 | ECEA2ES010 | E 1UF, 250V | C9229 | ECEA2WS2R2 | E 2.2UF, |
| C1901 | ECKF1H103ZF | C 0.01UF, Z, 50V | ΔC9230 | ECKDNS102MBX | C 1000PF, |
| C1902 | ECCF1H471J | C 470PF, J, 50V | ΔC9231 | ECKDNS222MEX | C 2200PF, |
| C1903 | ECCF1H561J | C 560PF, J, 50V | C9232 | ECKF1H682KB | C 6800PF, K, 50V |
| C1904 | ECKD2H103MD | C 0.01UF, M, 500V | C9233 | ECKF1H102KB | C 1000PF, K, 50V |
| C1905 | ECKD3D222JBN | C 2200PF, J, 2KV | C9301 | ECQM4223KZ | P 0.022UF, K, 400V |
| C1907 | ECEA2ES010 | E 1UF, 250V | C9302 | ECEA1CU221 | E 220UF, 16V |
| C3001 | ECKF1H103ZF | C 0.01UF, Z, 50V | C9303 | ECEA1CU101 | E 100UF, 16V |
| ΔC9001 | ECKD2H472PE8 | C 4700PF, 500V | C9305 | ECKD2H272KB2 | C 2700PF, K, 500V |
| ΔC9002 | ECKD2H472PE8 | C 4700PF, 500V | C9306 | ECEA1AU331 | E 330UF, 10V |
| ΔC9003 | ECKD2H472PE8 | C 4700PF, 500V | C9307 | ECKD3D101KBN | C 100PF, K, 2KV |
| ΔC9004 | ECKD2H472PE8 | C 4700PF, 500V | C9308 | ECKD3D101KBN | C 100PF, K, 2KV |
| ΔC9005 | ECES2GU221T | E 220UF, 400V | C9309 | ECKD2H102KB2 | C 1000PF, K, 500V |
| ΔC9006 | ECES2GU221T | E 220UF, 400V | C9310 | ECKD3A221KBN | C 220PF, 1KV |
| C9008 | ECKF1H472KB | C 4700PF, K, 50V | ΔC9311 | ECES2CG471M | E 470UF, 160V |
| ΔC9010 | ECQE6334KZ | P 0.33UF, M, 600V | C9312 | ECKD2H472PE8 | C 4700PF, P, 500V |
| C9101 | ECEA1VU331 | E 330UF, 35V | C9313 | ECKF1H222KB | C 2200PF, K, 50V |
| C9102 | ECKF1H103ZF | C 0.01UF, Z, 50V | C9314 | ECKF1H101KB | C 100PF, K, 50V |
| C9201 | ECQM4223KZ | P 0.022UF, K, 400V | ΔC9315 | ECEA1EU331 | E 330UF, 25V |
| C9202 | ECEA1CU221 | E 220UF, 16V | C9316 | ECKF1H102KB | C 1000PF, K, 50V |
| C9203 | ECEA1CU470 | E 47UF, 16V | C9317 | ECEA2WS4R7 | E 4.7UF, 450V |
| C9205 | ECKD2H272KB2 | C 2700PF, K, 500V | C9401 | ECEA1EU100 | E 10UF, 25V |
| C9206 | ECEA1AU331 | E 330UF, 10V | C9402 | ECEA1EU102 | E 1000UF, 25V |
| C9207 | ECKD3D101KBN | C 100PF, K, 2KV | C9403 | ECEA1EU100 | E 10UF, 25V |
| C9208 | ECKD3D101KBN | C 100PF, K, 2KV | C9404 | ECEA1EU102 | E 1000UF, 25V |
| C9209 | ECKF1H101KB | C 100PF, K, 50V | C9405 | ECEA1CU100 | E 10UF, 16V |
| C9211 | ECKD2H101KB2 | C 100PF, K, 500V | C9406 | ECEA1CU102 | E 1000UF, 16V |
| C9212 | ECKF1H101KB | C 100PF, K, 50V | C9407 | ECEA1VU331 | E 330UF, 35V |
| C9213 | ECKF1H101KB | C 100PF, K, 50V | ΔC9501 | ECQE6334KZ | P 0.33UF, 600V |
| C9214 | ECKD3A101KBN | C 100PF, 1KV | ΔC9502 | ECKDNS102MBX | C 1000PF, 600V |
| ΔC9215 | ECEA1EG222S | E 2200UF, 25V | ΔC9503 | ECKDNS102MBX | C 1000PF, 600V |
| C9216 | ECKF1H472KB | C 4700PF, K, 50V | COILS | | |
| ΔC9217 | ECEA2ES220 | E 22UF, 250V | L201 | TLP408 | FERRITE CORE |
| C9218 | ECKD2H472PE8 | C 4700PF, P, 500V | L202 | TLP408 | FERRITE CORE |
| C9219 | ECEA1VG221S | E 220UF, 35V | L203 | TLP408 | FERRITE CORE |
| C9220 | ECKF1H472KB | C 4700PF, K, 50V | L204 | TLP408 | FERRITE CORE |
| ΔC9221 | ECEA1EU222 | E 2200UF, 25V | L205 | TLP408 | FERRITE CORE |
| C9222 | ECKF1H472KB | C 4700PF, K, 50V | L206 | TLP408 | FERRITE CORE |

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|-------------------|----------|-------------|------------------|
| L301 | EFDMA645B85F | DELAY LINE | ΔL9001 | TLP13514V | FILTER |
| L302 | TLK158064 | CHROMA IF TRANS. | ΔL9003 | TSK1004 | COIL |
| L303 | TLK860-1 | DELAY LINE, VIDEO | L9208 | TSC925-4 | CHOKE COIL |
| L304 | TLX820J166C | PEAKING COIL | L9209 | TLQ100J126 | PEAKING COIL 10U |
| L305 | TLT180K991K | PEAKING COIL 18U | L9212 | TLT300K119C | PEAKING COIL |
| L401 | TLT221K991K | PEAKING COIL 220U | L9213 | TSC925-4 | CHOKE COIL |
| L601 | TLT150J991K | PEAKING COIL 15U | L9215 | TLQ100K126 | PEAKING COIL 10U |
| L602 | TLT120J991K | PEAKING COIL 12U | L9301 | TSC925-4 | CHOKE COIL |
| L603 | TLT681K991K | PEAKING COIL 680U | L9302 | TSC925-4 | CHOKE COIL |
| L604 | TLT820J991K | PEAKING COIL 82U | L9305 | TLQ120J126 | PEAKING COIL 12U |
| L605 | TLT100J991K | PEAKING COIL 10U | L9306 | TLQ100J126 | PEAKING COIL 10U |
| L606 | TLT681K991K | PEAKING COIL 680U | ΔL9501 | TLP13514V | |
| L607 | TLT512J166C | PEAKING COIL 5.1M | | | |
| L608 | TLT681K991K | PEAKING COIL 680U | | | |
| L609 | TLT390K991K | PEAKING COIL 39U | | | |
| L610 | TLT047K991K | PEAKING COIL 4.7U | | | |
| L611 | TLK61008 | HI-PEAKER TRANS. | | | |
| L612 | TLT150K991K | PEAKING COIL 15U | T1401 | TLH6433 | H DRIVE TRANS. |
| L613 | TLT100K991K | PEAKING COIL 10U | ΔT1402 | TLF14582F1 | FLYBACK TRANS |
| L614 | TLT121K991K | PEAKING COIL 120U | T1551 | TLH6433 | H DRIVE TRANS. |
| L615 | TLK155053 | CHROMA IF TRANS. | T1552 | TLH15808 | COIL |
| L616 | TLT150K991K | PEAKING COIL 15U | ΔT9101 | ETP41D103E | REMOCON TRANS |
| L617 | TLK158066 | 1H MATCHING COIL | ΔT9201 | ETS49K250A | SWITCHING TRANS |
| L618 | TLQ082J205C | PEAKING COIL 8.2U | T9202 | TLP15724 | CHOPPER TRANS. |
| L619 | TLK61008 | HI-PEAKER TRANS. | ΔT9301 | ETS49K251A | SWITCHING TRANS |
| L620 | TLK61008 | HI-PEAKER TRANS. | T9302 | TLP15724 | CHOPPER TRANS. |
| L621 | EFDEN645A11G | DELAY LINE | | | |
| L622 | TLK66056-1 | CHROMA TRANS. | | | |
| L1201 | TLT542K991K | PEAKING COIL 5.4M | | | |
| L1401 | TLT030L119C | PEAKING COIL 3U | D9 | MA151K | DIODE |
| L1402 | TSC911 | BEAD CHOKE | D10 | MA151K | DIODE |
| L1501 | TLT152K139G | PEAKING COIL 1.5M | D11 | MA151K | DIODE |
| L1551 | TLT030L119C | PEAKING COIL 3U | D12 | MA151K | DIODE |
| L1552 | TLH6663P | LINEALITY COIL | D14 | MA151K | DIODE |
| L1553 | TSC911 | BEAD CHOKE | D15 | MA151WK | DIODE |
| L1701 | TLQ470J126 | PEAKING COIL 47U | D16 | MA1068 | ZENER DIODE |
| L1702 | TLQ120J126 | PEAKING COIL 12U | D17 | MA151WK | DIODE |
| L1703 | TLQ101K126 | PEAKING COIL 100U | D18 | MA1068 | ZENER DIODE |
| L1801 | TLQ470K126 | PEAKING COIL 47U | D19 | MA151WK | DIODE |
| L1802 | TLQ120J126 | PEAKING COIL 12U | D20 | MA1068 | ZENER DIODE |
| L1803 | TLQ101K126 | PEAKING COIL 100U | D21 | MA1110M | ZENER DIODE |
| L1901 | TLQ470K126 | PEAKING COIL 47U | D22 | MA151K | DIODE |
| L1902 | TLQ120J126 | PEAKING COIL 12U | D23 | MA151K | DIODE |
| L1903 | TLQ101K126 | PEAKING COIL 100U | D24 | MA1068 | ZENER DIODE |
| | | | D25 | MA1036 | ZENER DIODE |
| | | | D26 | MA151WK | DIODE |
| | | | D27 | MA151K | DIODE |
| | | | D28 | MA151K | DIODE |

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|------------|-------------|----------|-------------|-------------|
| D30 | MA151K | DIODE | D601 | MA156 | DIODE |
| D31 | MA151K | DIODE | D602 | MA151K | DIODE |
| D32 | MA151K | DIODE | D603 | MA151K | DIODE |
| D33 | MA151K | DIODE | D604 | MA162 | DIODE |
| D34 | MA151K | DIODE | D606 | MA27WA | DIODE |
| D35 | MA151K | DIODE | D671 | MA151K | DIODE |
| D36 | MA151K | DIODE | D672 | MA151K | DIODE |
| D37 | MA151K | DIODE | D673 | MA151K | DIODE |
| D38 | MA151K | DIODE | D674 | MA151K | DIODE |
| D39 | MA151K | DIODE | D675 | OA91 | DIODE |
| D40 | MA151K | DIODE | D676 | MA151WK | DIODE |
| D41 | TVSQB106R | ZENER DIODE | D701 | MA151K | DIODE |
| D42 | MA151K | DIODE | D706 | MA162 | DIODE |
| D43 | MA151K | DIODE | D710 | TVSRD6.2EB | ZENER DIODE |
| D45 | MA151WK | DIODE | D712 | TVSQA206C | ZENER DIODE |
| D46 | MA151WK | DIODE | D713 | MA162 | DIODE |
| D47 | MA151WK | DIODE | D714 | TVSRD2.7EB1 | ZENER DIODE |
| D48 | MA151K | DIODE | D715 | TVSRD2.7EB1 | ZENER DIODE |
| D301 | OA90G | DIODE | D716 | MA162 | DIODE |
| D302 | MA27WA | DIODE | D717 | MA162 | DIODE |
| | | | D718 | MA162 | DIODE |
| D303 | MA151K | DIODE | D719 | MA151A | DIODE |
| D305 | MA28T-A | DIODE | D720 | MA28T-A | DIODE |
| D306 | MA151WK | DIODE | D721 | MA28T-A | DIODE |
| D307 | MA151K | DIODE | D722 | MA151WA | DIODE |
| D310 | MA28W | DIODE | D723 | TVSRD6.2EB | ZENER DIODE |
| D401 | MA154WK | DIODE | D724 | MA151K | DIODE |
| D402 | MA154WK | DIODE | D725 | MA151K | DIODE |
| D403 | MA154WK | DIODE | D726 | TVSQA211D | DIODE |
| D404 | MA28T-A | DIODE | D727 | TVSRD9.1EB | ZENER DIODE |
| D405 | MA28T-A | DIODE | D728 | TVSQA206C | ZENER DIODE |
| D406 | MA151K | DIODE | D1001 | MA1130M | ZENER DIODE |
| D407 | MA28T-A | DIODE | D1002 | MA162 | DIODE |
| D408 | MA28T-A | DIODE | D1004 | TVSRM1 | DIODE |
| D409 | MA1200M | DIODE | D1005 | MA1130 | ZENER DIODE |
| D410 | MA151A | DIODE | D1009 | MA1130 | ZENER DIODE |
| D451 | MA27W | DIODE | D1010 | MA1130 | ZENER DIODE |
| D482 | MA162 | DIODE | D1011 | MA1130 | ZENER DIODE |
| D483 | MA162 | DIODE | D1014 | MA1130 | ZENER DIODE |
| D484 | MA162 | DIODE | D1015 | MA1130 | ZENER DIODE |
| D503 | TVSQA211M | ZENER DIODE | D1016 | MA1130 | ZENER DIODE |
| △D507 | TVSQA207M3 | ZENER DIODE | D1017 | MA1130 | ZENER DIODE |
| D508 | TVSRM1Z | DIODE | D1018 | MA1130 | ZENER DIODE |
| D551 | MA162 | DIODE | D1019 | MA1130 | ZENER DIODE |

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|-------------|-------------|----------|-------------|-----------------------|
| D1021 | MA1062M | ZENER DIODE | D9208 | TVSRG4YK2 | DIODE |
| D1022 | MA27T-B | | △D9209 | TVSC2406M | DIODE |
| D1201 | MA150 | DIODE | D9210 | ESAC85009F9 | DIODE |
| D1202 | MA1051 | ZENER DIODE | D9211 | TVSQA212B | ZENER DIODE |
| D1203 | MA150 | DIODE | D9212 | MA1150M | DIODE |
| D1204 | MA150 | DIODE | D9213 | MA162 | DIODE |
| D1205 | MA150 | DIODE | D9214 | MA162 | DIODE |
| D1402 | MA150 | DIODE | △D9215 | ON3105 | PHOTO COUPLER |
| D1403 | MA162 | DIODE | D9301 | TVSB4402 | DIODE |
| △D1404 | MA1091 | ZENER DIODE | D9302 | TVSB4402 | DIODE |
| D1405 | MA162 | DIODE | D9303 | TVSC2408M | DIODE |
| D1407 | MA162 | DIODE | D9304 | TVSQA212B | ZENER DIODE |
| D1408 | TVSRU1 | DIODE | △D9305 | CTG-26SLF-I | DIODE |
| D1409 | TVSRU2 | DIODE | △D9306 | MA1120M | ZENER DIODE |
| D1410 | TVSRU2 | DIODE | D9307 | MA1150M | DIODE |
| D1411 | TVSRU2 | DIODE | △D9308 | TVSRG2Z | DIODE |
| D1412 | TVSEM1Z | DIODE | D9310 | MA162 | DIODE |
| D1413 | TVSEM1Z | DIODE | D9311 | MA162 | DIODE |
| D1415 | MA156 | DIODE | △D9312 | ON3105 | PHOTO COUPLER |
| D1551 | TVSC2715M | DIODE | D9401 | TVSQB115ZB | ZENER DIODE |
| D1601 | TVSRC2 | DIODE | D9402 | MA27T-B | |
| D1602 | TVSRC2 | DIODE | D9403 | TVSQB115ZB | ZENER DIODE |
| D1701 | TVSRC2 | DIODE | D9404 | MA27T-B | |
| D1801 | TVSRC2 | DIODE | D9405 | MA1100H | |
| D1901 | TVSRC2 | DIODE | D9406 | MA27T-B | ZENER DIODE |
| △D9001 | TVSC0110 | DIODE | | I. C | |
| △D9002 | TVSC0110 | DIODE | IC10 | TVS4LS04 | IC (HEX INVERTER) |
| △D9003 | TVSC0110 | DIODE | IC11 | TVS4LS10 | IC (NAND GATE) |
| △D9004 | TVSC0110 | DIODE | IC12 | TC4053BP | BLUE MODE SELECT |
| D9005 | MA162 | DIODE | IC13 | TC4053BP | BLUE MODE SELECT |
| D9006 | MA162 | DIODE | IC14 | TC4053BP | VIDEO/RGB SWITCHING |
| D9007 | TVSQA209C | ZENER DIODE | IC15 | AN610P | |
| D9008 | TVSQA211M | ZENER DIODE | IC16 | AN610P | SHADING CORRECTION(R) |
| △D9009 | ERZC10DK431 | VARISTOR | IC17 | AN610P | SHADING CORRECTION(G) |
| D9101 | TVSRM1OB | DIODE | IC18 | AN5355 | SHADING CORRECTION(B) |
| D9102 | TVSQA211M | ZENER DIODE | IC19 | TC4040BP | VIDEO/TEST SWITCHING |
| D9103 | MA162 | DIODE | | | GROSSHATCH |
| D9104 | LN21RPHL | LED (RED) | IC301 | MN4066B | GENERATOR |
| D9201 | TVSB4402 | DIODE | IC302 | AN5615 | IC (SWITCH) |
| D9202 | TVSB4402 | DIODE | △ IC401 | AN5429 | IC (VIDEO) |
| D9203 | TVSC2408M | DIODE | IC405 | AN90C23 | IC (DEF. SYNC) |
| | | | IC406 | AN90C23 | SELECTOR |
| △D9204 | ESAC85009 | DIODE | IC501 | AN90C23 | SELECTOR |
| △D9205 | TVSC2408M | DIODE | IC502 | AN90C23 | SELECTOR |
| D9206 | TVSRG2Z | DIODE | IC551 | BA236B | HD DELAY |
| △D9207 | MA650 | DIODE | | | |

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|----------------------------|----------|----------|--------------------------------|
| IC552 | TVSTC4053BP | IC (MULTIPREXER) | Q29 | 2SB709-R | EMITTER FOLLOWER |
| IC554 | AN78M05LB | IC (VOLTAGE REG.) | Q30 | 2SD601-R | MIX |
| IC601 | AN5625N | IC (PAL COLOR) | Q31 | 2SD601-R | EMITTER FOLLOWER |
| IC602 | AN5635N | IC (SECAM COLOR) | Q32 | 2SD601-R | EMITTER FOLLOWER |
| IC671 | AN5641 | IC (SYSTEM) | Q33 | 2SB709-R | EMITTER FOLLOWER |
| IC701 | TVSSTK4101M2 | IC PWB | Q34 | 2SB709-R | EMITTER FOLLOWER |
| IC702 | TVSSTK4101M2 | IC PWB | Q35 | 2SB709-R | EMITTER FOLLOWER |
| IC703 | TVSSTK4101M2 | IC PWB | Q36 | 2SB709-R | EMITTER FOLLOWER |
| IC704 | AN904 | IC (DIFF AMP) | Q37 | 2SB709-R | EMITTER FOLLOWER |
| IC705 | AN904 | IC (DIFF AMP) | Q38 | 2SB709-R | EMITTER FOLLOWER |
| IC706 | AN904 | IC (DIFF AMP) | Q39 | 2SD601-R | BLACK LEVEL CLAMP |
| IC707 | AN904 | IC (DIFF AMP) | Q40 | 2SD601-R | BLACK LEVEL CLAMP |
| IC1001 | AN78M05 | IC (VOLTAGE REG.) | Q41 | 2SD601-R | BLACK LEVEL CLAMP |
| IC1002 | TC4053BP | INPUT SELECT MANU/ REMO | Q42 | 2SD601-R | BLACK LEVEL CLAMP |
| IC1003 | TC4053BP | INPUT SELECT MANU/ REMO | Q43 | 2SD601-R | BLACK LEVEL CLAMP |
| IC1004 | TC4053BP | INPUT SELECT MANU/ REMO | Q44 | 2SD601-R | BLACK LEVEL CLAMP |
| IC1201 | TVSTC4066BP | IC (SWITCH) | Q45 | 2SD601-R | BLACK LEVEL CLAMP |
| ΔIC9201 | TNH11505AZ | OSC CONTROL ARD | Q46 | 2SD601-R | BLACK LEVEL CLAMP |
| ΔIC9301 | TNH11505AZ | OSC CONTROL | Q47 | 2SB709-R | AMP. |
| | | | Q48 | 2SB709-R | AMP. |
| | | | Q49 | 2SB709-R | AMP. |
| | | | Q50 | 2SB709-R | EMITTER FOLLOWER |
| | | | Q51 | 2SB709-R | EMITTER FOLLOWER |
| | | | Q52 | 2SB709-R | EMITTER FOLLOWER |
| | | | Q53 | 2SD601-R | SAW WAVE CONTROL |
| Q9 | 2SD601-R | BUFFER | Q54 | 2SD601-R | AMP. |
| Q10 | 2SD601-R | BUFFER | Q55 | 2SD601-R | V. SAW WAVE CONTROL |
| Q11 | 2SD601-R | BUFFER | Q56 | 2SD601-R | EMITTER FOLLOWER |
| Q12 | 2SC2295-B | AMP. | Q57 | 2SD601-R | INVERTER |
| Q13 | 2SC2295-B | AMP. | Q58 | 2SD601-R | INVERTER |
| Q14 | 2SC2295-B | AMP. | Q59 | 2SD601-R | SWITCH |
| Q15 | 2SC2295-B | CLAMP | Q60 | 2SD601-R | SWITCH |
| Q16 | 2SC2295-B | CLAMP | Q61 | 2SD601-R | SWITCH |
| Q17 | 2SC2295-B | CLAMP | Q62 | 2SB709-R | EMITTER FOLLOWER |
| Q18 | 2SD601-R | CLAMP | Q63 | 2SB709-R | EMITTER FOLLOWER |
| Q19 | 2SD601-R | CLAMP | Q64 | 2SB709-R | EMITTER FOLLOWER |
| Q20 | 2SD601-R | CLAMP | Q68 | 2SD601-R | INVERTER |
| Q21 | 2SB709-R | EMITTER FOLLOWER MIX | Q69 | 2SB709-R | PROTECTOR |
| Q22 | 2SB709-R | FINE BLUE COMPOSITION | Q70 | 2SD601-R | COMPOSITE SYNC ON PROTECTOR |
| Q23 | 2SB709-R | EMITTER FOLLOWER MIX | Q71 | 2SD601-R | |
| Q24 | 2SB709-R | EMITTER FOLLOWER | Q72 | 2SD601-R | H. PULSE ON |
| Q25 | 2SD601-R | SQUARE WAVE | Q73 | 2SB709-R | INVERTER |
| | | GENERATOR | Q74 | 2SD601-R | INVERTER |
| Q26 | 2SD601-R | SQUARE WAVE | Q75 | 2SD601-R | INVERTER |
| | | GENERATOR | Q76 | 2SD601-R | MULTIVIBRATOR |
| Q27 | 2SD601-R | EMITTER FOLLOWER MIX | | | |
| Q28 | 2SB709-R | MIX | | | |

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|----------|-------------------|----------|-----------|---------------------|
| Q77 | 2SD601-R | MULTIVIBRATOR | Q408 | 2SB709A-R | V-HOLD |
| Q78 | 2SD601-R | INVERTER | Q409 | 2SB709A-R | AMP. |
| Q79 | 2SD601-R | EMITTER FOLLOWER | Q410 | 2SB709A-R | AMP. |
| Q80 | 2SD601-R | MIX | Q411 | 2SB709A-R | AMP. |
| Q81 | 2SD601-R | MIX | Q412 | 2SB709A-R | AMP. |
| Q82 | 2SD601-R | MIX | Q413 | 2SB709A-R | AMP. |
| Q83 | 2SD601-R | INVERTER | Q414 | 2SC1685-R | AVR. |
| Q84 | 2SD601-R | TEST ON | Q451 | 2SC1505 | V. DRIVE |
| Q85 | 2SD601-R | BLACK LEVEL CLAMP | Q452 | 2SC2168 | V. OUT |
| Q86 | 2SD601-R | AMP. | Q453 | 2SA958F | V. OUT |
| Q87 | 2SD601-R | EMITTER FOLLOWER | Q481 | 2SD601A-R | AMP. |
| Q88 | 2SD601-R | INVERTER | Q482 | 2SD601A-R | AMP. |
| Q89 | 2SD601-R | INVERTER | Q483 | 2SD601A-R | SYNC SEPARATOR |
| Q90 | 2SD601-R | RGB ON | △ Q510 | 2SD601A-R | SHUT DOWN |
| Q91 | 2SD601-R | SQUARE WAVE | △ Q511 | 2SB709A-R | |
| | | GENERATOR | △ Q512 | 2SD601A-R | AMP. |
| Q92 | 2SB709-R | V. BLANKING PULSE | Q551 | 2SD601A-R | SYNC SEPARATOR |
| | | GENERATOR | Q553 | 2SD601A-R | INVERTER |
| Q93 | 2SD601-R | V. BLANKING PULSE | Q559 | 2SD601A-R | |
| Q95 | 2SD601-R | RGB ON | Q601 | 2SD601-R | PHASE SHIFT |
| Q301 | 2SD601-R | SWITCHING CONTROL | Q602 | 2SB709-R | APC FILTER SWITCH |
| Q302 | 2SD601-R | } SYNC CLAMP | Q603 | 2SD601-R | BUFFER |
| Q303 | 2SB709-R | | Q604 | 2SD601-R | IDENT GAIN SWITCH |
| Q304 | 2SB709-R | | Q605 | 2SD601-R | |
| Q305 | 2SD601-R | EMITTER FOLLOWER | Q671 | 2SD601-R | SECAM KILLER SWITCH |
| Q306 | 2SD601-R | BUFFER | Q672 | 2SD601-R | SECAM KILLER SWITCH |
| Q307 | 2SD601-R | BUFFER | Q673 | 2SD601-R | TRAP SWITCH |
| Q308 | 2SD601-R | AMP. | Q674 | 2SD601-R | SECAM KILLER SWITCH |
| Q309 | 2SD601-R | AMP. | Q675 | 2SD601-R | SWITCHING |
| Q310 | 2SD601-R | BUFFER | Q676 | 2SD601-R | 50 Hz/60 Hz SWITCH |
| Q311 | 2SD601-R | VIDEO AMP. | Q701 | 2SD601A-R | WAVEFORM SHAPING |
| Q312 | 2SB709-R | VIDEO AMP. | Q702 | 2SD601A-R | WAVEFORM SHAPING |
| Q313 | 2SB709-R | BUFFER | Q703 | 2SD601A-R | AMP. |
| Q314 | 2SD601-R | } C-Y MATRIX (R) | Q705 | 2SD601A-R | EMITTER FOLLOWER |
| Q315 | 2SB709-R | | Q706 | 2SD601A-R | EMITTER FOLLOWER |
| Q316 | 2SB709-R | | Q707 | 2SD601A-R | EMITTER FOLLOWER |
| Q317 | 2SD601-R | } C-Y MATRIX (G) | Q708 | 2SD601A-R | EMITTER FOLLOWER |
| Q318 | 2SB709-R | | Q709 | 2SD601A-R | EMITTER FOLLOWER |
| Q319 | 2SB709-R | | Q712 | 2SD601A-R | } H. PARABOLA |
| Q320 | 2SD601-R | } C-Y MATRIX (B) | Q713 | 2SD601A-R | } WAVE AMP. |
| Q321 | 2SB709-R | | Q714 | 2SD601A-R | EMITTER FOLLOWER |
| Q322 | 2SB709-R | | Q715 | 2SD601A-R | SWITCHING |
| Q323 | 2SD601-R | BUFFER | Q716 | 2SD601A-R | EMITTER FOLLOWER |
| Q324 | 2SD601-R | SWITCHING | Q717 | 2SD601A-R | INVERTER |
| Q325 | 2SD601-R | SWITCHING | Q718 | 2SD601A-R | AMP. |

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|-----------|----------------------|----------|-----------|----------------------|
| Q719 | 2SD601A-R | EMITTER FOLLOWER | Q1010 | 2SC1685-Q | PINSTER OFF SW. |
| Q720 | 2SD601A-R | | Q1201 | 2SC1685-Q | |
| Q721 | 2SB709A-R | | Q1202 | 2SA564A | |
| Q722 | 2SD601A-R | | Q1203 | 2SC1685-Q | |
| Q723 | 2SD601A-R | | Q1204 | 2SC1685-Q | SYNC. SEPARATOR |
| Q724 | 2SB709A-R | | Q1205 | 2SC1685-Q | |
| Q725 | 2SD601A-R | CORNER CORRECTION | Q1206 | 2SC1685-Q | |
| Q726 | 2SD601A-R | WAVE GENERATOR | Q1207 | 2SC1685-Q | |
| Q727 | 2SD601A-R | | Q1208 | 2SC1685-Q | |
| Q728 | 2SB709A-R | | Q1209 | 2SC1685-Q | |
| Q729 | 2SD601A-R | | Q1210 | 2SC1685-Q | |
| Q730 | 2SD601A-R | | Q1211 | 2SC1685-Q | |
| Q731 | 2SB709A-R | | Q1212 | 2SC1685-Q | |
| Q732 | 2SD601A-R | SWITCHING | Q1213 | 2SC1685-Q | |
| Q733 | 2SB709A-R | EMITTER FOLLOWER | Q1214 | 2SC1685-Q | VIDEO SEPARATOR |
| Q734 | 2SB709A-R | OVER CURRENT | Q1215 | 2SC1685-Q | |
| Q735 | 2SD601A-R | PROTECT | Q1216 | 2SC1685-Q | |
| Q736 | 2SD601A-R | OVER CURRENT | Q1217 | 2SA564-R | |
| Q737 | 2SB709A-R | PROTECT | Q1218 | 2SA564-R | |
| Q738 | 2SD601A-R | EMITTER FOLLOWER | Q1219 | 2SC1685-Q | SWITCHING CONTROL |
| Q739 | 2SD601A-R | EMITTER FOLLOWER | Q1220 | 2SC1685-Q | SYNC. INVERSION SW. |
| Q740 | 2SD601A-R | SWITCHING | Q1221 | 2SC1685-Q | SYNC. INVERSION SW. |
| Q741 | 2SD601A-R | H. SAW TOOTH WAVE | Q1222 | 2SC1685-Q | SYNC. SEPARATION |
| Q742 | 2SD601A-R | EMITTER FOLLOWER | Q1401 | 2SC1573-Q | VOLTAGE COMPENSATOR |
| Q981 | 2SD601A-R | EMITTER FOLLOWER | Q1402 | 2SC1573-Q | LINEALITY CORRECTION |
| Q982 | 2SD601A-R | KEYSTONE CORRECTION | Q1403 | 2SC1505 | HV-DRIVE |
| Q983 | 2SD601A-R | SIDE PIN CORRECTION | ΔQ1404 | 2SD1457A | HV-REGULATOR |
| Q984 | 2SD601A-R | AMP. | ΔQ1405 | 2SC1573-Q | HIGH VOLTAGE |
| Q985 | 2SD601A-R | EMITTER FOLLOWER | ΔQ1406 | 2SC1685-R | REGULATOR |
| Q986 | 2SD601A-R | | Q1407 | 2SD1175 | HIGH VOLTAGE |
| Q987 | 2SD601A-R | OVER CURRENT | ΔQ1408 | 2SC1573-Q | REGULATOR |
| Q988 | 2SB709A-R | PROTECT | ΔQ1409 | 2SC1573-Q | HIGH VOLTAGE |
| Q989 | 2SD601A-R | SIDE EDGE CORRECTION | Q1501 | 2SC1573-R | REGULATOR |
| Q990 | 2SB709A-R | | Q1502 | 2SC1573-R | |
| Q991 | 2SB709A-R | CORNER CORRECTION | Q1503 | 2SC1573-R | KEYSTONE AMP. |
| Q992 | 2SD601A-R | WAVE GENERATOR | Q1504 | 2SC1573-R | |
| Q993 | 2SD601A-R | AMP. | Q1505 | 2SC1573-R | |
| Q994 | 2SD601A-R | EMITTER FOLLOWER | Q1506 | 2SC1573-R | SIDE PINCUSHION |
| Q995 | 2SD601A-R | EMITTER FOLLOWER | Q1507 | 2SA879-P | AMP. |
| Q1001 | 2SA564A | EMITTER FOLLOWER | Q1508 | 2SA879-P | REGULATOR |
| Q1002 | 2SC1685-Q | RGB/COMP OFF | Q1509 | 2SC1573-R | REGULATOR |
| Q1003 | 2SC1685-Q | RGB ON | Q1510 | 2SC1573-R | RIPPLE FILTER |
| Q1004 | 2SA564A | COMP ON | Q1511 | 2SD1457A | RIPPLE FILTER |
| Q1005 | 2SD1273 | AVR | Q1512 | 2SC1573-R | PINCUSHION AMP. |
| | | | | | AMP. |

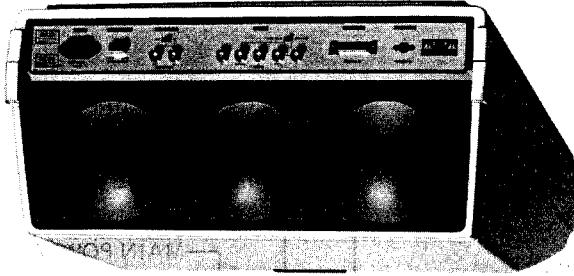
| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|--------------|--------------------------------|----------|--------------|---------------------|
| Q1513 | 2SC1573-R | AMP. | | TJS118930 | 3GP CONNECTOR |
| Q1514 | 2SC1685-R | AMP. | | TJS148500 | CONNECTOR |
| Q1551 | 2SC1505 | H-DIRVE | | TJS168440 | 3P SHORT PLUG |
| Q1552 | 2SD1175 | H. OUT | | TJS168960 | 2P CONNECTOR |
| Q1601 | 2SC1685-R | INVERTER | | TJS168970 | 3P CONNECTOR |
| Q1602 | 2SC1685-R | INVERTER | | TJS168980 | 4P CONNECTOR |
| Q1603 | 2SD1346 | INVERTER | | TJS168990 | 5P CONNECTOR |
| Q1701 | 2SC1819M | R OUT | | TJS169010 | CONNECTOR |
| Q1801 | 2SC1819M | G OUT | | TJS169020 | 8P CONNECTOR |
| Q1901 | 2SC1819M | B OUT | | TJS169030 | 10P CONNECTOR |
| Q9001 | 2SC1573B | REGULATOR | | TJS169040 | 12P CONNECTOR |
| Q9002 | 2SC1573B | REGULATOR | | TJS169050 | CONNECTOR (15P) |
| Q9101 | 2SD1273 | 12V REGULATOR | | TJS169061 | 2P CONNECTOR |
| Q9201 | 2SD1539 | SWITCHING DRIVE | | TJS169071 | CONNECTOR |
| Q9202 | 2SB1071 | SWITCHING OUT | | TJS169081 | CONNECTOR |
| △Q9203 | 2SC3507 | SWITCHING OUT | | TJS169121 | CONNECTOR 10P |
| Q9301 | 2SD1539 | SWITCHING DRIVE | | TJS169131 | CONNECTOR |
| Q9302 | 2SB1071 | SWITCHING DRIVE | | TKG139964 | LENS (R/G) |
| △Q9303 | 2SC3507 | SWITCHING OUT | | TKG139965 | LENS (B) |
| Q9401 | 2SD1273 | 17V AVR | | TKK130719 | LENS CAP |
| Q9402 | 2SB941 | -17V AVR | | TKN13511 | FAN NET |
| Q9403 | 2SD1273 | 12V AVR | | TKP1311512-1 | CONVER DOOR |
| Q9404 | 2SC1318-R | 27V REGULATOR | | TKP1311532-2 | FRONT PANEL |
| OTHERS | | | | TKR23340 | FAN GUARD |
| △ | EMCS0352M | 3P CONNECTOR | | TKR23400 | FAN METAL |
| | FBP-12A24LZD | DC FAN | | TKR23410 | PLATE |
| | TBM130160 | MODEL NAME PLATE (PT-102N) | | TKR23430 | METAL FLAME (L) |
| | TBM130161 | MODEL NAME PLATE (PT-102GN) | | TKR23440 | METAL FLAME (R) |
| | TBM130205 | MODUL NAME PLATE (PT102AN) | | TKR23450 | METAL FLAME |
| | TBM130204 | MODEL NAME PLATE (PT-102SN) | | TKR23520 | CALAR |
| | TBM17036-1 | NAME PLATE | | TKP1311522 | OPERATION DOOR |
| | TBX1386500 | SELECTOR BUTTON | | TKY131701-1 | UPPER CABINET |
| | TBX1550302 | POWER BUTTON | | TKY131801-1 | BOTTOM CABINET |
| | TEK17911 | DOOR LOCK SWITCH | | TLY15229F | DEFLECTION YOKE (G) |
| | TES4583 | SPRING | | TLY15230F | DEFLECTION YOKE (R) |
| | TES7151 | SPRING | | TLY15231F | DEFLECTION YOKE (B) |
| | THE600 | BOLT | | TMM15205 | CRT SOCKET COVER |
| | THE757 | BOLT | | TNP100066 | CIRCUIT BOARD F |
| | THW70023W | WASHER | | TNP51568BZ | CIRCUIT BOARD Q |
| | THW70024 | WASHER | | TNP51569BZ | CIRCUIT BOARD P |
| | TJS1A5060 | CRT SOCKET | | TNP51570CZ | CIRCUIT BOARD K |
| | TJS1A8220 | 25P CONNECTOR | | TNP52504AZ | CIRCUIT BOARD V |
| | TJS118070 | AC SOCKET | | TNP52907 | CIRCUIT BOARD R |
| | TJS118920 | 50P CONNECTOR | | TNP55165 | CIRCUIT BOARD A |
| | | | | TNP55166 | CIRCUIT BOARD B |
| | | | | TNP55167 | CIRCUIT BOARD S |
| | | | | TNP55168 | CIRCUIT BOARD T |

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|-------------|---------------------------------|-----------------|-----------|---------------------|
| | TNP55169 | CIRCUIT BOARD M | N1401 | TJC6320 | FUSE HOLDER |
| | TNP55180 | CIRCUIT BOARD G | △RL9101 | XANT343 | NEON LAMP |
| | TNP60975CB | CIRCUIT BOARD LR | | TSE1827 | RELAY |
| | TNP60976CB | CIRCUIT BOARD LG | S1 | ESD32170 | TERMINATOR RESISTOR |
| | TNP60977CB | CIRCUIT BOARD LB | | ESD32170 | SWITCH |
| | TNP100265AA | CIRCUIT BOARD X | | | SYNC./G SELECTOR |
| | TNP62344AZ | CIRCUIT BOARD D | S2 | ESD32170 | SWITCH |
| | TNP62345ZA | CIRCUIT BOARD TR1 | | | NORMAL/SERVICE |
| | TNP62346ZA | CIRCUIT BOARD TR2 | S10 | TSE392 | SWITCH |
| | TNP62358ZA | CIRCUIT BOARD Z | | | SYNC. INVERSION |
| | TNP62368ZA | CIRCUIT BOARD H1 | S1201 | ESD3228 | SWITCH |
| | TNP62369ZA | CIRCUIT BOARD H2 | S3001 | TSE10418 | POWER SWITCH |
| | TNP62372ZA | CIRCUIT BOARD Y | S3002 | ESD32176 | BLUE SELECTOR |
| | | | | | SWITCH |
| | TNP66417AZ | CIRCUIT BOARD C | S3003 | TSE10417 | INPUT SELECTOR |
| | TNP66418 | CIRCUIT BOARD J | | | SWITCH |
| | TNX13013 | H.V. DISTRIBUTER | S7002 | TSE389 | RASTER OFF SWITCH |
| | TNX13017 | FOCUS PACK | S7003 | TSE389 | RASTER OFF SWITCH |
| | TPC1341201 | OUTER CARTON (PT-102N) | | | |
| | TPC1341203 | OUTER CARTON (PT-102GN) | S7004 | TSE389 | RASTER OFF SWITCH |
| | TPC1341204 | OUTER CARTON (PT-102SN) | S7005 | EVQRBAL10 | TV/VTR SWITCH |
| | TPC1341205 | OUTER CARTON (PT-102AN) | S8001 | ESD32170 | TEST SWITCH |
| | | | S8002 | TSE182 | SYSTEM SWITCH |
| △ | | | △S9001 | ESB99577V | MAIN POWER SWITCH |
| | TPD131066 | CUSHION (UPPER) | S9002 | TSE960 | GUARD SWITCH |
| | TPD131067 | CUSHION (UPPER) | X601 | TSS816M | CRYSTAL OSCILLATOR |
| | TPD132066 | CUSHION (BOTTOM) | X602 | TSS116M1 | CRYSTAL |
| | TPD132067 | CUSHION (BOTTOM) | | TKZ178116 | LOCK SCREW |
| | TPE174054 | SEET | | TKX132801 | LENS GRIL |
| | TQB510046 | INSTRUCTION BOOK | | THE765 | SCREW |
| | TSX3189 | POWER SUPPLY CORD (PT-102N) | | TMX139818 | LENS SPACER |
| △ | TSX3105 | POWER SUPPLY CORD (PT-102GN) | | TMX13917 | (ONLY FOR 50" R/B) |
| △ | TSX3197 | POWER SUPPLY CORD (PT-102AN) | | TMX13920 | LENS SPACER |
| △ | TSX5119 | POWER SUPPLY CORD (PT-102SN) | | TMX13919 | (ONLY FOR 70" R/B) |
| △△ | TXFCRTRFLZ | PICTURE TUBE (R) | | | LENS SPACER |
| △△ | TXFCRTGFLZ | PICTURE TUBE (G) | | TMX13922 | (ONLY FOR 120" R/B) |
| △△ | TXFCRTBFLZ | PICTURE TUBE (B) | | TMX13921 | LENS SPACER |
| | TXFKR01BE6 | METAL ASS., Y | | | (ONLY FOR 120" G) |
| | XNG10B | NUT | | THN2986T | WASHER |
| | XTS3+12BFZ | SCREW | | TKR23420 | FIXING METAL |
| | THT950-2 | SCREW | | | |
| | XWB10B | WASHER | | | |
| | XWH10 | WASHER | | | |
| | XYN3+C6S | SCREW | | | |
| △ | F2 | XBA2C31TR0 | FUSE 250V 3.15A | | |
| | | TPD139177 | CARTON | | |

Service Manual



V11879



Colour Video Projector

PT-102Y/GY**chassis No. Q5**

GY U.K. Only

Please file and use this service manual together with the service manual for Model No. PT-102N/GN/AN/SN, Order No. VED86090024C3 and the supplement manual for Model No. PT-102N/GN/AN/SN, Order No. VED88030077S1.

Specifications

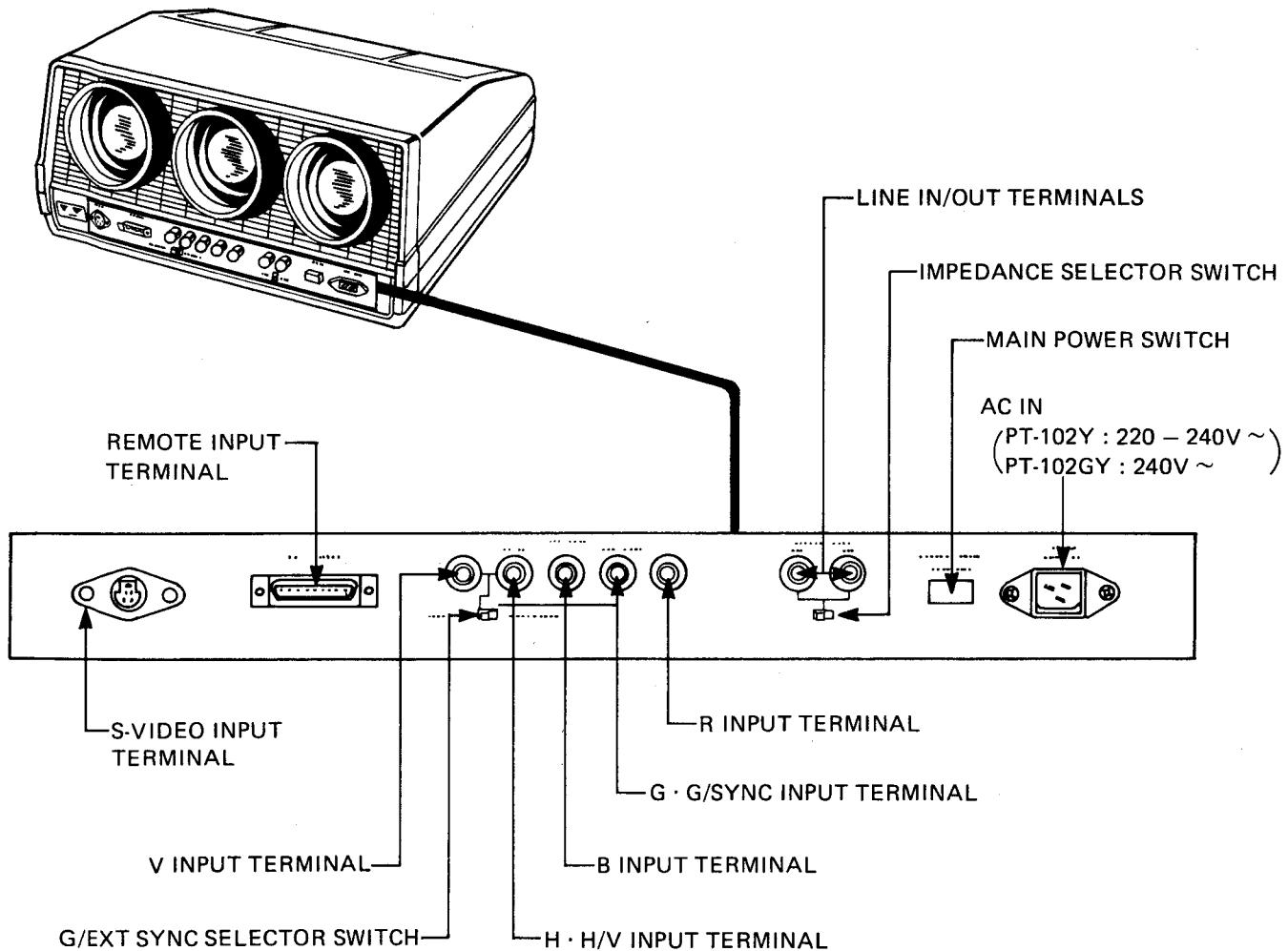
| | | |
|----------------------|--|---|
| Power Source: | AC 220V ~ 240V, 50/60 Hz (PT-102Y) AC 240V, 50 Hz (PT-102GY) | 2540 mm (100 inches) Picture size: 3037 mm (119 19/32 inches) |
| Power Consumption: | 189W | 3048 mm (120 inches) Picture size: 3635 mm (143 3/32 inches) |
| Projection Tube: | 7 inch specially developed high-Brightness liquid cooled CRTs (R, G, B). | 650 lumens (typical) at white peak |
| Lenses: | Double Focus; Three F1.0 f145 Lenses (HYBRID) | Light Flux: |
| Resolution: | Video..... 650 TV Lines (typical) RGB..... 1000 TV Lines (typical) | Operating Ambient Temperature: |
| S-Video Input Level: | Y: $1 \pm 0.3V_{p-p}$ 75Ω , C : $0.286V_{p-p}$ | Operating Ambient Humidity: |
| Line in/out Level: | $1 \pm 0.3V_{p-p}$ 75Ω or high impedance | 20% ~ 80% |
| RGB Input Level: | R: $0.7 \pm 0.3V_{p-p}$ 75Ω G: $0.7 \pm 0.3V_{p-p}$ 75Ω (G/SYNC: $1 \pm 0.3V_{p-p}$ 75Ω) B: $0.7 \pm 0.3V_{p-p}$ 75Ω H · H/V: $0.3 \sim 6V$, high impedance V: $0.3 \sim 6V$, high impedance | Supplied Accessories: |
| Screen Size: | 1270 ~ 3048 mm (50 ~ 120 inches) | AC Cord (PT-102Y) AC Mains Lead (PT-102GY) Mounting Kit (1 set) SPACER G: TMX13917, TMX13919 B, R: TMX13918, TMX13920 |
| Throw Distance: | 1270 mm (50 inches) Picture size: 1670 mm (65 3/4 inches) 1829 mm (72 inches) Picture size: 2210 mm (87.0 inches) | Dimensions: Width: 576 mm (22 11/16 inches) Depth: 606 mm (23 29/32 inches) Height: 290 mm (11 13/32 inches) |
| | | Mass (weight): 77 lbs. (35 kg) |

Specifications are subject to change without notice.
Weight and dimensions shown are approximate.

Panasonic

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

LOCATION OF CONTROLS



CHANGE OF REF. NO.

- Please change the Ref. No. on A-Board to the Ref. No. 3000 series.

| Application | Part No. |
|-------------|---|
| A-Board | TNP100911 |
| Parts | All Parts : Ref. No. 300 series and 600 series |
| Example | R301 → R3301 C601 → C3601 D301 → D3301 |

CHANGE OF PARTS LIST

- This parts list indicates the differences between; PT-102N/GN and PT-102Y/GY.

| Ref. No. | Part No. | | Description |
|------------------|--------------|--------------|---------------------|
| | PT-102N/GN | PT-102Y/GY | |
| RESISTORS | | | |
| R1 | ERD25FJ750 | _____ | _____ |
| R3 | ERD25FJ750 | _____ | _____ |
| R4 | ERD25FJ750 | _____ | _____ |
| R5 | ERD25FJ750 | _____ | _____ |
| R3612 | ERJ8GCZJ395 | ERJ8GCYJ125 | M 1.2M OHM, J, 1/8W |
| R617 | ERJ8GCYJ183 | _____ | _____ |
| R1264 | ERD25TJ681 | _____ | _____ |
| R1269 | ERD25TJ330 | ERD25FJ1R0K | C 1 OHM, J, 1/4W |
| R1270 | _____ | ERD25FJ750K | C 75 OHM, J, 1/4W |
| R3008 | ERD25FJ103 | ERD25FJ822K | C 8.2K OHM, J, 1/4W |
| R3009 | EVJFMAEA4B53 | EVJFNAEA4B14 | CONTROL 10K OHMB |
| R3400 | _____ | ERJ8GCYJ102 | M 1K OHM, J, 1/8W |
| R3401 | _____ | ERJ8GCYJ102 | M 1K OHM, J, 1/8W |
| R3403 | _____ | ERJ8GCYJ104 | M 100K OHM, J, 1/8W |
| R3404 | _____ | ERJ8GCYJ273 | M 27K OHM, J, 1/8W |
| R3405 | _____ | ERD25FJ750K | C 75 OHM, J, 1/4W |
| R3701 | _____ | ERJ8GCYJ104 | M 100K OHM, J, 1/8W |
| R3702 | _____ | ERJ8GCYJ222 | M 2.2K OHM, J, 1/8W |
| R3703 | _____ | ERJ8GCYJ333 | M 33K OHM, J, 1/8W |
| R3704 | _____ | ERJ8GCYJ104 | M 100K OHM, J, 1/8W |
| R3705 | _____ | ERJ8GCYJ391 | M 390 OHM, J, 1/8W |
| R3706 | _____ | ERJ8GCYJ332 | M 3.3K OHM, J, 1/8W |
| R3707 | _____ | ERJ8GCYJ683 | M 68K OHM, J, 1/8W |
| R3708 | _____ | ERJ8GCYJ104 | M 100K OHM, J, 1/8W |
| R3709 | _____ | ERJ8GCYJ333 | M 33K OHM, J, 1/8W |
| R3710 | _____ | ERJ8GCYJ104 | M 100K OHM, J, 1/8W |
| R3711 | _____ | ERJ8GCYJ391 | M 390 OHM, J, 1/8W |
| R3712 | _____ | ERJ8GCYJ332 | M 3.3K OHM, J, 1/8W |
| R3713 | _____ | ERJ8GCYJ683 | M 68K OHM, J, 1/8W |
| R3714 | _____ | ERJ8GCYJ104 | M 100K OHM, J, 1/8W |
| R3715 | _____ | ERJ8GCYJ333 | M 33K OHM, J, 1/8W |
| R3716 | _____ | ERJ8GCYJ104 | M 100K OHM, J, 1/8W |
| R3717 | _____ | ERJ8GCYJ391 | M 390 OHM, J, 1/8W |
| R3718 | _____ | ERJ8GCYJ332 | M 3.3K OHM, J, 1/8W |
| R3719 | _____ | ERJ8GCYJ683 | M 68K OHM, J, 1/8W |
| R3723 | _____ | ERJ8GCYJ391 | M 390 OHM, J, 1/8W |
| R3724 | _____ | ERJ8GCYJ332 | M 3.3K OHM, J, 1/8W |
| R3725 | _____ | ERJ8GCYJ683 | M 68K OHM, J, 1/8W |
| R3727 | _____ | ERD25FJ750K | C 75 OHM, J, 1/4W |

PT-102Y/GY

| Ref. No. | Part No. | | Description | | |
|--------------------|--------------|--------------|------------------|-----------|---------|
| | PT-102N/GN | PT-102Y/GY | | | |
| R3728 | _____ | ERJ8GCYJ222 | M | 2.2K OHM, | J, 1/8W |
| R3729 | _____ | ERJ8GCYJ154 | M | 150K OHM, | J, 1/8W |
| CAPACITORS | | | | | |
| C3608 | ECQM1H272JV | ECQM1H472JV | P | 4700PF, | J, 50V |
| C3690 | _____ | ECUX1H103KBM | C | 0.01UF, | K, 50V |
| C3691 | _____ | ECUX1H103KBM | C | 0.01UF, | K, 50V |
| C3692 | _____ | ECUX1H102KBM | C | 1000PF, | K, 50V |
| C3693 | _____ | ECUX1H103KBM | C | 0.01UF, | K, 50V |
| C3694 | _____ | ECUX1H103KBM | C | 0.01UF, | K, 50V |
| C3695 | _____ | ECUX1H103KBM | C | 0.01UF, | K, 50V |
| C3696 | _____ | ECUX1H821KBM | C | 820PF, | K, 50V |
| COIL | | | | | |
| L3630 | _____ | ELT10Z327 | COIL | | |
| DIODES | | | | | |
| D3311 | _____ | MA151K | DIODE | | |
| D3678 | _____ | MA151K | DIODE | | |
| D3679 | _____ | MA1110 | DIODE | | |
| TRANSISTORS | | | | | |
| Q3330 | _____ | 2SD601AR | TRANSISTOR | | |
| Q3681 | _____ | 2SD601AR | TRANSISTOR | | |
| Q3682 | _____ | 2SD601AR | TRANSISTOR | | |
| Q3683 | _____ | 2SD601AR | TRANSISTOR | | |
| Q3684 | _____ | 2SD601AR | TRANSISTOR | | |
| Q3685 | _____ | 2SD601AR | TRANSISTOR | | |
| Q3686 | _____ | 2SD601AR | TRANSISTOR | | |
| Q3687 | _____ | 2SD601AR | TRANSISTOR | | |
| Q3688 | _____ | 2SD601AR | TRANSISTOR | | |
| Q3701 | _____ | 2SD601AR | TRANSISTOR | | |
| RELAY | | | | | |
| RL3701 | _____ | TSE1865 | RELAY | | |
| TERMINAL | | | | | |
| JK3001 | _____ | TJS2A8760 | S-VIDEO TERMINAL | | |
| OTHERS | | | | | |
| | TKP1311532-2 | TKP1311532-4 | FRONT PANEL | | |
| | TQB510046 | TQB510076 | INSTRUCTION BOOK | | |
| | TNP55165 | TNP100911 | A BOARD | | |
| | TNP55168 | TNP55168AZ | T BOARD | | |
| | TNP55180 | TNP55180AZ | G BOARD | | |
| | _____ | TNP100912 | E BOARD | | |
| | TNP55167 | TNP55167AZ | S BOARD | | |

| Ref. No. | Part No. | | Description |
|-------------------------|------------|------------|-------------|
| | PT-102N/GN | PT-102Y/GY | |
| MODEL NAME PLATE | | | |
| | TBM130160 | TBM130334 | PT-102Y |
| | TBM130161 | TBM130336 | PT-102GY |
| OUTER CARTON | | | |
| | TPC1341201 | TPC1341206 | PT-102Y |
| | TPC1341203 | TPC1341208 | PT-102GY |

CHANGE OF ADJUSTMENTS

- Refer to section 6 on page 15.

PT-102N/GN

6. VERTICAL HEIGHT ADJUSTMENT

2) VIDEO MODE

- Receive a PAL Phillips pattern signal.
- Adjust the Video V-Size control VR (R428) to achieve a pattern height of 1957 mm.
- Set the Input signal selector SW. (S3003) to VIDEO and receive an NTSC monoscope pattern signal.
- Adjust the NTSC Sub V-Size control VR (R432) to achieve a pattern height of 1957 mm.

3) RGB MODE

- Set the Input signal selector SW. (S3003) to RGB.
- Receive an RGB signal from an RGB signal generator.
- Adjust the RGB V-Size control VR (R437) to achieve a pattern height of 1957 mm.

PT-102Y/GY

6. VERTICAL HEIGHT ADJUSTMENT

2) VIDEO MODE

- Receive a PAL Phillips pattern signal.
- Adjust the Video V-Size control VR (R428) to achieve a pattern height of 1631 mm.
- Set the Input signal selector SW. (S3003) to VIDEO and receive an NTSC monoscope pattern signal.
- Adjust the NTSC Sub V-Size control VR (R432) to achieve a pattern height of 1631 mm. Change

3) RGB MODE

- Set the Input signal selector SW. (S3003) to RGB.
- Receive an RGB signal from an RGB signal generator.
- Adjust the RGB V-Size control VR (R437) to achieve a pattern height of 1631 mm. Change

- Refer to section 7 on page 15 and 16.

PT-102N/GN

7. HORIZONTAL WIDTH ADJUSTMENT

2) VIDEO MODE

- Receive an PAL Phillips pattern signal.
- Adjust the Video H-Size control VR (R1541) to achieve a pattern width of 2609 mm.

3) RGB MODE

- Set the Input signal selector SW. (S3003) to RGB.
- Receive an RGB signal from an RGB signal generator.
- Adjust the RGB H-Size control VR (R1536) to achieve a pattern width of 2609 mm.

PT-102Y/GY

7. HORIZONTAL WIDTH ADJUSTMENT

2) VIDEO MODE

- Receive an PAL Phillips pattern signal.
- Adjust the Video H-Size control VR (R1541) to achieve a pattern width of 2174 mm. Change

3) RGB MODE

- Set the Input signal selector SW. (S3003) to RGB.
- Receive an RGB signal from an RGB signal generator.
- Adjust the RGB H-Size control VR (R1536) to achieve a pattern width of 2174 mm. Change

CHANGE OF SCHEMATIC DIAGRAM

- For A/G/T/E-Board sections, Refer to this manual only.
- For other Board sections, Refer to the service manual for PT-102N/GN.

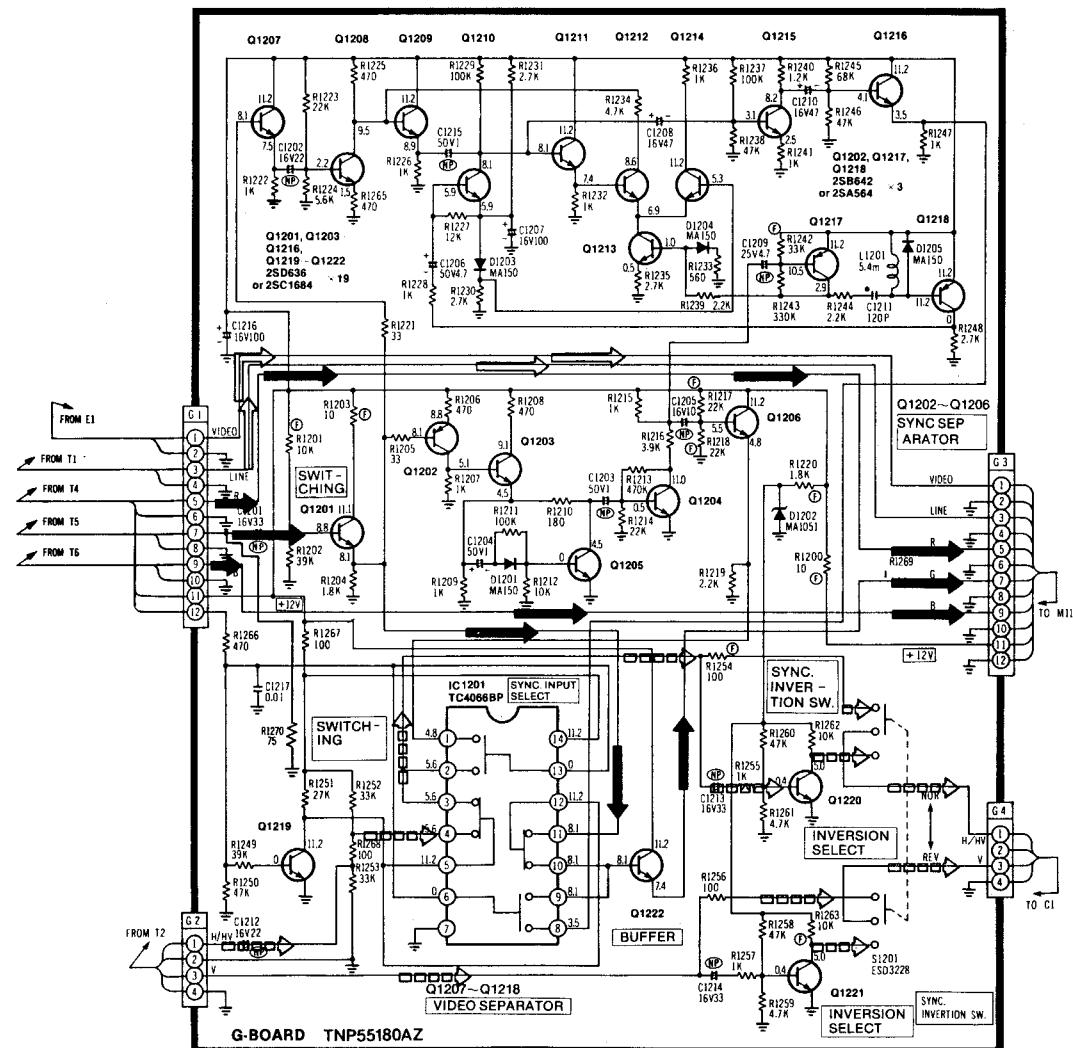
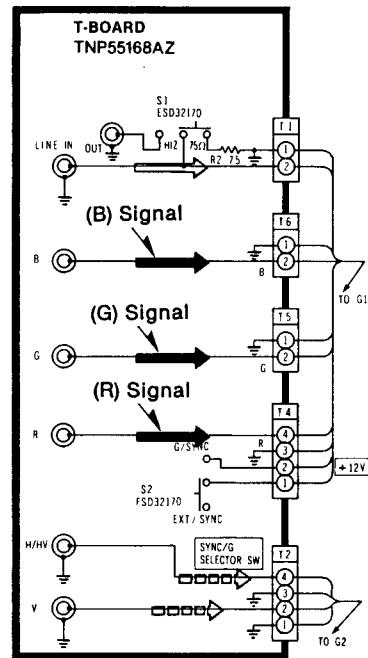
(G/T-BOARD Sections) ← Video Signal

Note:

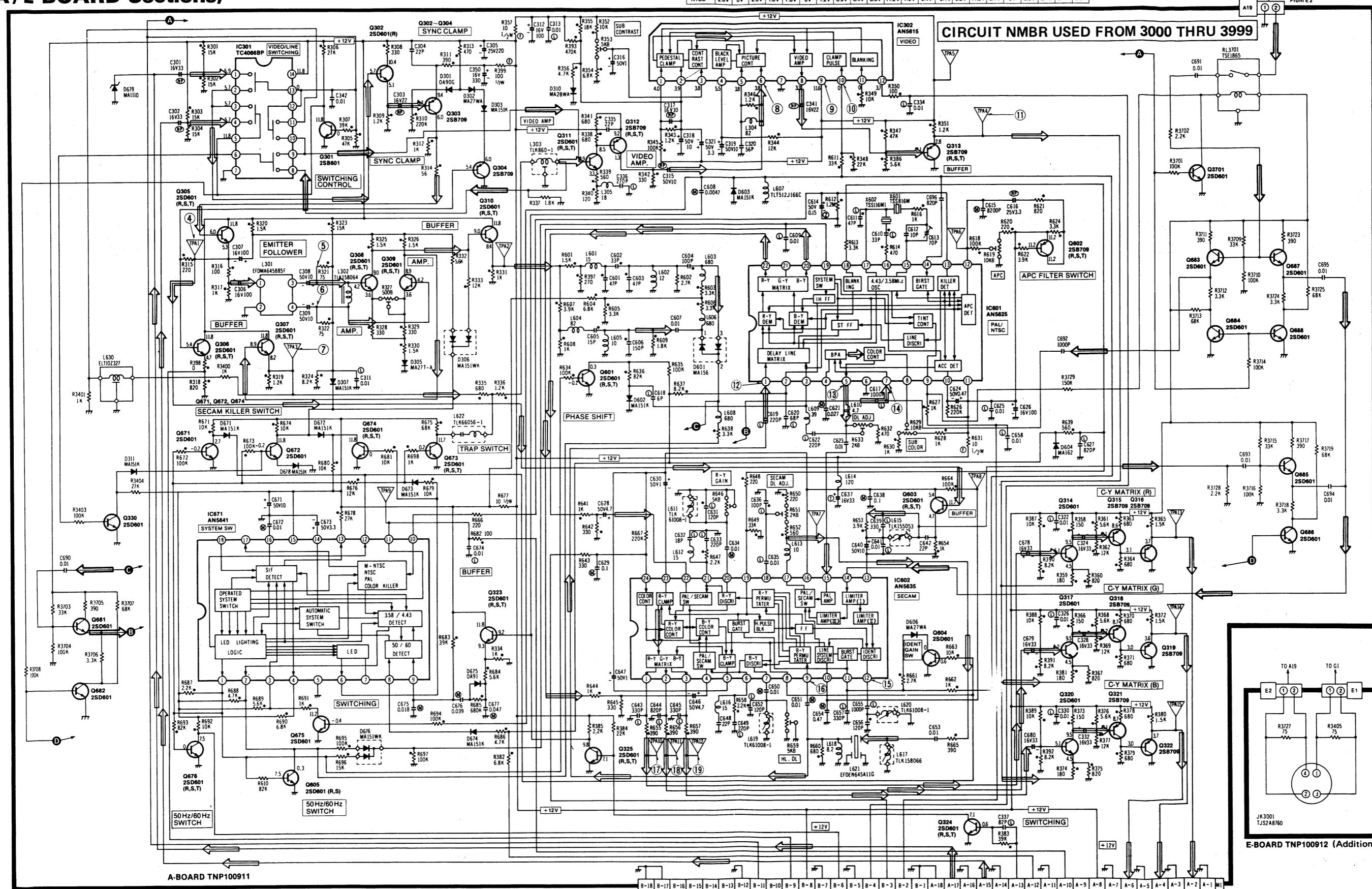
1. RESISTOR

For G/T/E-Board sections, all resistors are carbon 1/4W resistor and for A-Board section, all resistors are carbon 1/8W resistor, unless otherwise noted the following marks.
Unit of resistance is OHM (Ω) (K= 1,000, M = 1,000,000).

| | |
|----------------------|--------------------|
| △ : Solid | ⊗ : Fuse |
| □ : Wire Wound | ● : Metal Oxide |
| Ⓕ : Non-Flambe | Ⓛ : Lead Less Type |
| Ⓜ : Fixed Metal Film | |



(A / E-BOARD Sections)



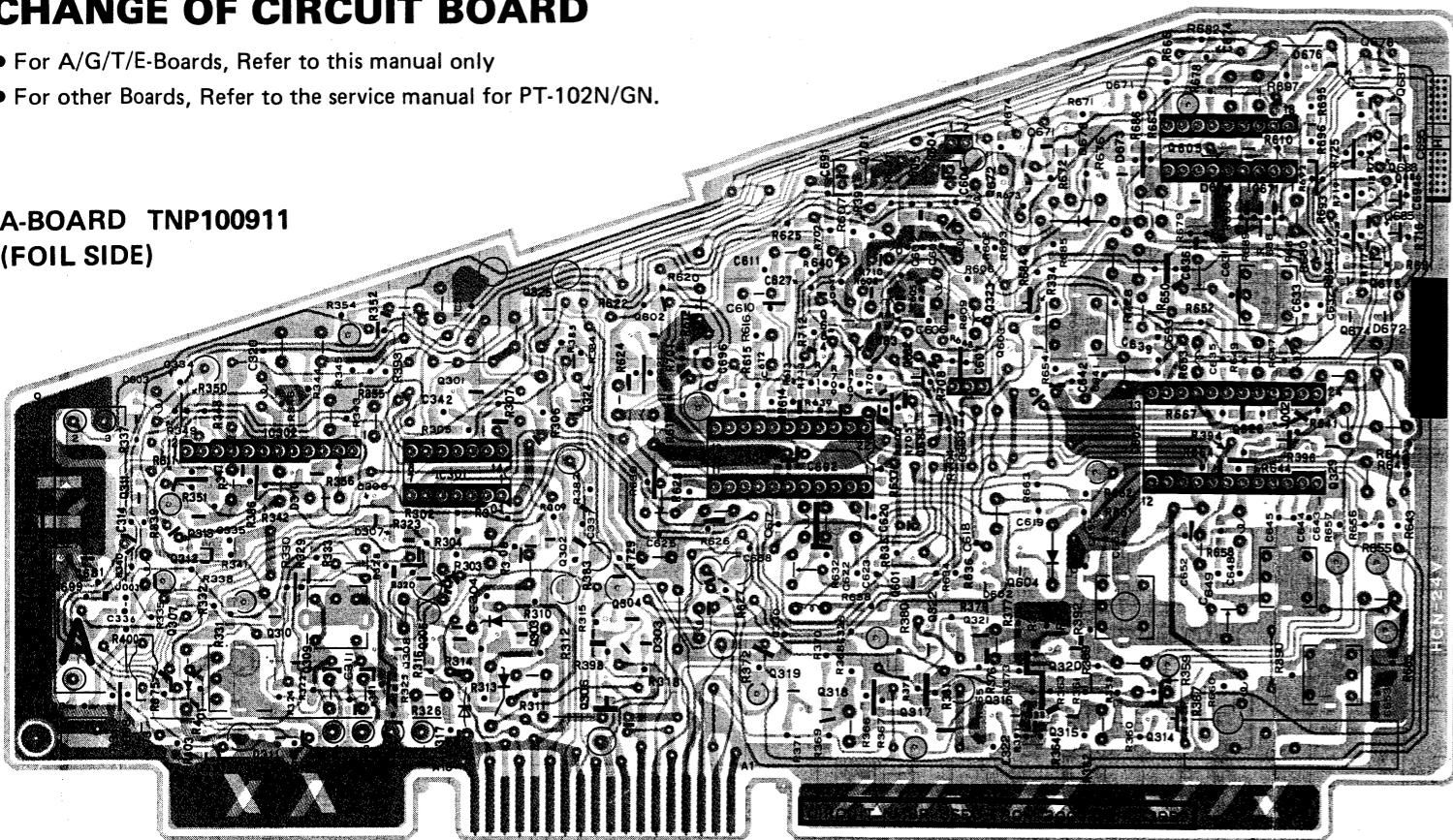
| 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|----|------|------|-------|------|------|------|------|------|----|------|----|------|------|-------|------|------|------|------|------|------|-------|------|
| 8V | 7.1V | 4.8V | 10.2V | 4.8V | 3.2V | 0.1V | 3.2V | 3.3V | 0V | 3.3V | 0V | 2.3V | 3.2V | 11.7V | 7.4V | 3.0V | 0.3V | 3.2V | 4.8V | 4.9V | 10.1V | 5.1V |
| 0V | 6.4V | 4.8V | 10.2V | 4.7V | 3.2V | 1.1V | 2.5V | 7.5V | 0V | 3.3V | 0V | 2.3V | 3.2V | 11.7V | 7.2V | 2.4V | 0.3V | 3.2V | 4.9V | 4.9V | 10.1V | 5.1V |

PT-102Y/GY PT-102Y/GY

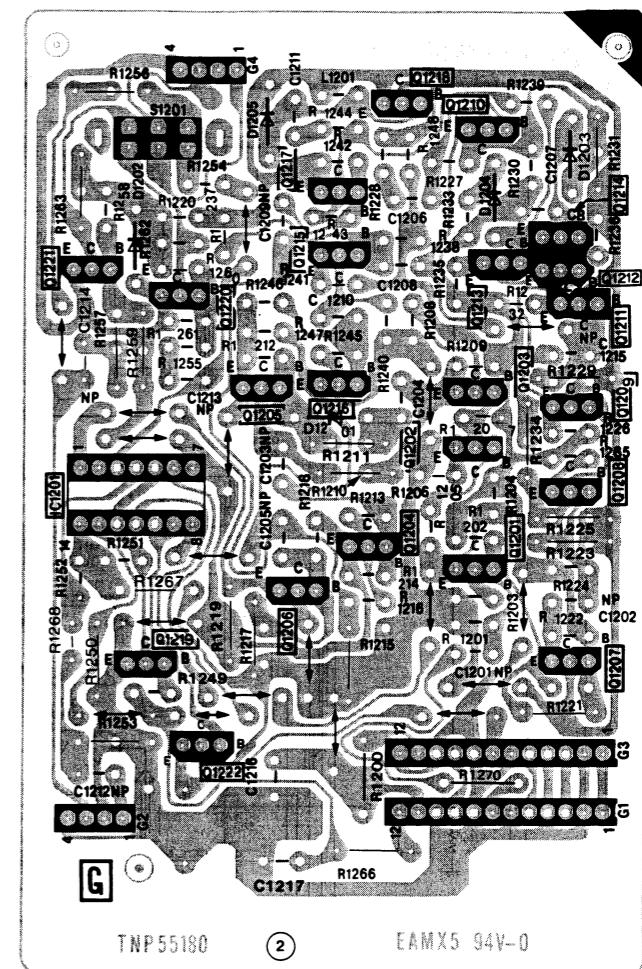
CHANGE OF CIRCUIT BOARD

- For A/G/T/E-Boards, Refer to this manual only
- For other Boards, Refer to the service manual for PT-102N/GN.

**A-BOARD TNP100911
(FOIL SIDE)**



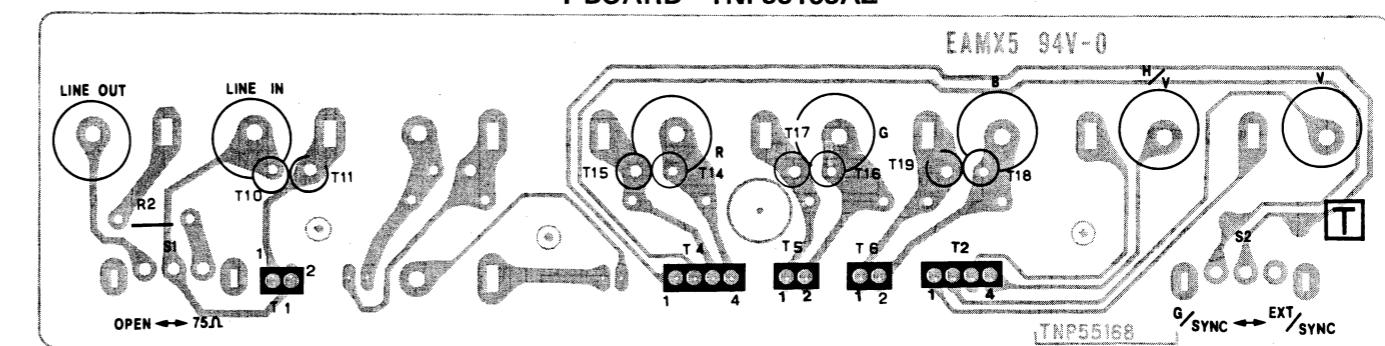
G-BOARD TNP55180AZ



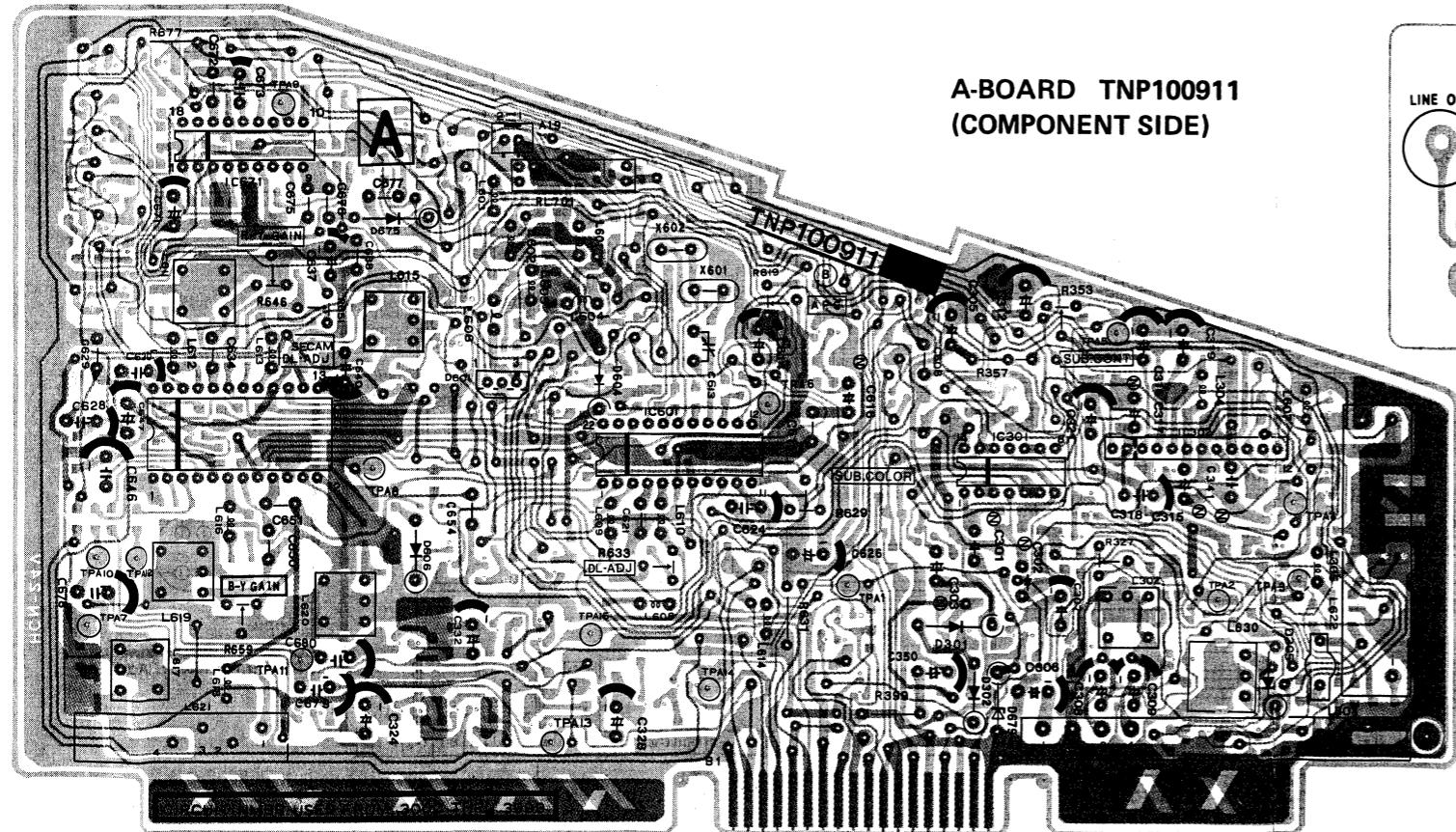
TNP55180

EAMX5 94V-0

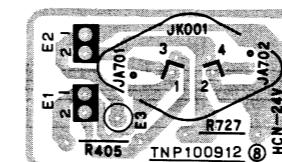
T-BOARD TNP55168AZ



**A-BOARD TNP100911
(COMPONENT SIDE)**



E-BOARD TNP100912



**CHIP TRANSISTOR
PIN CONNECTION**

